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DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PERU

SUBNATIONAL TRANSPORTATION SUPPORT PROGRAM (PATS)

(PE-L1135)

LOAN PROPOSAL

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REQUIRED

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2. Monitoring and evaluation plan
3. Environmental and social management plan (ESMP)
4. Procurement plan

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2. Feasibility study
3. Representative sample of the program
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5. Methodological note on the program impact evaluation
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ABBREVIATIONS

CGR	Office of the Comptroller General
EIRR	Economic internal rate of return
ENPV	Economic net present value
ESMR	Environmental and Social Management Report
FONIE	Fund for Economic Inclusion in Rural Areas
GDP	Gross domestic product
IBRD	International Bank for Reconstruction and Development
INEI	National Statistics and Informatics Institute
MEF	Ministry of Economy and Finance
MIDIS	Ministry of Development in Social Inclusion
MIMP	Ministry of Women and Vulnerable Populations
MTC	Ministry of Transportation and Communications
OCI	Órgano de Control Institucional [Institutional Control Unit]
PESEM	Multiyear Strategic Plan for the Transportation and Communications Sector
PVD	Provías Descentralizado
SIAF	Sistema Integrado de Administración Financiera [Integrated Financial Management System]

PROJECT SUMMARY

PERU
SUBNATIONAL TRANSPORTATION SUPPORT PROGRAM
(PE-L1135)

<table>
<tr><th colspan="5">Financial Terms and Conditions</th></tr>
<tr><td colspan="3" rowspan="4">Borrower: Republic of Peru
Executing agency: Ministry of Transportation and Communications (MTC), through Provías Descentralizado (PVD)</td><td colspan="2">Flexible Financing Facility (FFF)[a]</td></tr>
<tr><td>Amortization period:</td><td>12.85 years</td></tr>
<tr><td>Original weighted average life:</td><td>12.58 years[b]</td></tr>
<tr><td>Disbursement period:</td><td>5 years</td></tr>
<tr><td>Source</td><td>Amount</td><td>%</td><td>Grace period:</td><td>12.30 years[b]</td></tr>
<tr><td>IDB (Ordinary Capital):</td><td>US$50 million</td><td>8.3</td><td>Inspection and supervision fee:</td><td>[c]</td></tr>
<tr><td>Parallel financing (World Bank):[d]</td><td>US$50 million</td><td>8.3</td><td>Interest rate:</td><td>LIBOR-based</td></tr>
<tr><td>Local:</td><td>US$500 million</td><td>83.3</td><td>Credit fee:</td><td>[c]</td></tr>
<tr><td>Total:</td><td>US$600 million</td><td>100.0</td><td>Currency:</td><td>U.S. dollars from the Ordinary Capital (OC)</td></tr>
<tr><th colspan="5">Project at a Glance</th></tr>
<tr><td colspan="5">Objective: The objectives of the program are: (i) to facilitate sustainable road access for Peru’s rural population to basic services, jobs, and markets in order to help reduce poverty; and (ii) to help make the country more competitive by reducing transportation costs on local roads associated with priority logistics corridors. The specific objectives are: (i) to help reduce vehicle operating costs; (ii) to help reduce travel times; and (iii) to help strengthen decentralized road management.</td></tr>
<tr><td colspan="5">Special contractual conditions precedent to the first disbursement of the loan. The executing agency, acting through PVD, will approve the Program Operating Manual under the terms previously agreed upon with the Bank (paragraph 3.5).</td></tr>
<tr><td colspan="5">Exceptions to Bank policies: None</td></tr>
<tr><td colspan="5">Project qualifies as:[e] SV [ ] PE [X] CC [ ] CI [ ]</td></tr>
</table>

(a) Under the terms of the Flexible Financing Facility (document FN-655-1), the borrower has the option of requesting changes to the amortization schedule, as well as currency and interest rate conversions. The Bank will take operational and risk management considerations into account when reviewing such requests.

(b) The original weighted average life of the loan and the grace period may be shorter, depending on the effective signature date of the loan contract, which is estimated to be 15 December 2015.

(c) The credit fee and inspection and supervision fee will be established periodically by the Board of Executive Directors as part of its review of the Bank’s lending charges, in accordance with the applicable provisions of the Bank’s policy on lending rate methodology for Ordinary Capital loans.

(d) The World Bank will contribute US$50 million in parallel financing, which is independent of the local counterpart contribution in terms of fulfillment of the objectives and activities set out in this proposal.

(e) SV (Small and Vulnerable Countries), PE (Poverty Reduction and Equity Enhancement), CC (Climate Change, Sustainable Energy, and Environmental Sustainability), CI (Regional Cooperation and Integration).

I. DESCRIPTION AND RESULTS MONITORING

A. Background, problem addressed, and rationale

1.1 **Socioeconomic framework.** Peru's macroeconomic performance has been remarkably strong over the last decade, with growth averaging 6.2%[1] of GDP and an inflation rate of 3.3% in 2014. As of 2015, growth is projected in the range of 3.5% to 5.5%[2] for the coming years. Economic achievements have led to significant progress in reducing poverty, from 52% in 2003 to 22.7% in 2014. Peru was ranked 82nd out of 187 countries in the 2014 human development index,[3] with a score of 0.737 out of 1.

1.2 **Rural population and poverty.** These achievements notwithstanding, significant challenges remain in rural areas, where 46% of the population was living under the poverty line in 2014, compared with only 15.3% in urban areas.[4] Some areas of the country remain very poor, with development constrained by gaps in access to public services and markets. The poorest communities are located in geographic areas with limited access to public goods such as health care and education. Studies[5] indicate that the leading cause of rural poverty is population dispersion, which hinders access to markets and services. As for public utilities, only 53% of the rural population has water service, 72% has electrical service, and 14.1% has sewer service, compared with 84%, 98.8%, and 79% of the urban population, respectively. The illiteracy rate among the rural poor is 19.8%, compared with 8.8% of the urban poor. Average monthly earned income for 2013 was S/.623.3 (US$207) in rural areas, a figure that was more than twice as high (211%) in urban areas (S/.1,137.2, or US$440). The rural population living in poverty also has a distinct profile in terms of the sectors in which they work: the rural poor work primarily in agriculture, fishing, and mining (55.5%), services (14%), commerce (11.3%), and manufacturing (7.5%), whereas the nonpoor population works mainly in services (34.8%), commerce (21%), agriculture, fishing, and mining (18.8%), and manufacturing (10%).

1.3 Against this backdrop, the Peruvian government has prioritized social inclusion as a way to reduce poverty, establishing the Ministry of Development in Social Inclusion (MIDIS) and, specifically, the Fund for Economic Inclusion in Rural Areas (FONIE).[6] MIDIS's primary role is to set and implement policies for social inclusion on the basis of, *inter alia*, coordinated cross-sector and interagency efforts to

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1 Rate of real GDP growth for 2005-2014.

2 Multiyear Macroeconomic Framework 2016-2018. Ministry of Economy and Finance (MEF). Republic of Peru.

3 The human development index for individual countries is a statistical social indicator that is a composite of three parameters: long and healthy life, education, and decent standard of living.

4 Trends in Monetary Poverty 2009-2014. National Statistics and Informatics Institute. Office of the Chairperson of the Council of Ministers of Peru.

5 *Conexión y despegue rural.* Richard Webb (2013). Consortium of Economic and Social Research and University of San Martín de Porres, Peru.

6 The FONIE was created by Article 23 of Law 29951, the Public Sector Budget Act for Fiscal Year 2013, in order to finance the preparation of preinvestment studies and the execution of public investment and/or maintenance projects submitted by regional or local governments, by the sector itself, or by private firms for the execution of infrastructure for water and sanitation, electrification, telecommunications, and local roads.

achieve greater impacts in the fight against poverty. One of the strategic pillars of the social inclusion policy is economic inclusion, to be achieved by improving basic infrastructure in high-poverty rural areas.

1.4 **Infrastructure for competitiveness.** The poor condition of roadways has repercussions on the country's competitiveness, directly impacting freight transportation costs.[7] The problems related to country competitiveness are reflected in international indicators such as the 2014-2015 Global Competitiveness Index,[8] where Peru ranked 65th out of 144 countries. The Peruvian government has been pursuing measures aimed at making the economy more competitive through the 2014-2018 Competitiveness Agenda and by strengthening the National Competitiveness Council. This council coordinates and monitors implementation of the aforementioned agenda,[9] which includes logistics and transportation infrastructure as a priority area.

1.5 **Road safety.** Peru had 15.9 roadway fatalities per 100,000 inhabitants in 2010,[10] which is below the average of 16.3 for Latin America and the Caribbean.[11] The number of traffic accidents, however, rose 37% between 2005 and 2013, with an average of 83,746 accidents per year over this period and 3,176 deaths in 2013.[12]

1.6 **Organization and state of the road sector.** Ground transportation is the primary means of freight and passenger transportation. The road network consists of 156,792 kilometers of roadways, of which: (i) 25,005 kilometers (15.6%) are part of the National Road Network, which is overseen by the Ministry of Transportation and Communications (MTC), the lead agency for the sector; (ii) 24,992 kilometers (15.9%) are departmental or secondary road networks, overseen by the regional governments; and (iii) 106,794 kilometers (68.1%)[13] make up the tertiary road network, also known as the local road network or local access roads,[14] overseen by local governments.

1.7 Road surfaces in the National Road Network are in good condition, with 56% of these roads paved, as opposed to 1.7% of the local road network. In all, 11% of the roads are in good condition, 43% are in fair condition, 35% are in poor

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7 The cost of transportation in Peru is US$0.47 per ton-kilometer, the most expensive among a sample of 20 countries in the region and higher than the average cost for Andean countries (US$0.091) Source: Freight Transport and Logistics Statistics Yearbook of the IDB.

8 World Economic Forum. On this index, which measures the quality of infrastructure as one component of a country's competitiveness, Peru is ranked 88th, below such economies as those of El Salvador and Guatemala.

9 Competitiveness Agenda 2014-2018, National Competitiveness Council, MEF.

10 Global Status Report on Road Safety 2013, World Health Organization.

11 *Diagnóstico de Seguridad Vial en América Latina y el Caribe* [Diagnostic Assessment of Road Safety in Latin America and the Caribbean], IDB, 2009.

12 *Accidentes de tránsito* [Traffic accidents], National Statistics and Informatics Institute (INEI). Office of the Chairperson of the Council of Ministers of Peru.

13 In 2005 the network of local access roads measured 45,000 kilometers. The road inventory financed under loan operation 1810/OC-PE updated this figure to 106,794 kilometers.

14 In this document, the terms *local* or *rural access roads* refer to the tertiary road network.

condition, and 11% are in very poor condition,[15] suggesting the need for effective mechanisms to manage road assets.

1.8 **Management of the tertiary road network.** Tertiary roads are managed by the provincial municipios, although most of these lack the technical and financial capacity to effectively carry out projects.[16] To address this situation, the MTC provides institutional and financial support to provincial municipios through Provías Descentralizado (PVD).[17]

1.9 PVD is an executing unit of the MTC under the Office of the Deputy Minister of Transportation. It is responsible for preparing, managing, administering, and, when appropriate, executing departmental and rural transportation infrastructure projects and programs of various types, as well as for building and strengthening institutional capacities for decentralized management of departmental and rural transportation. PVD has satisfactorily executed three local road rehabilitation programs since 1995, with very good outcomes:

Table 1. Bank financing in the tertiary road network

Loan		Year	Amount (US$ million)
901/OC-PE	Rural Roads Rehabilitation and Maintenance Project	1995	90
1328/OC-PE	National Rural Transportation Infrastructure Program – Stage II	2001	50
1810/OC-PE	Decentralized Rural Transportation Program[18]	2007	50

1.10 **Identification of the problem.** The poor condition of the road network leads to higher transportation costs and adversely affects the country's competitiveness and the rural population's access to social services and jobs, as well as the ability to bring goods to production and consumption centers.[19] While rural poverty has

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15 Classification of road condition in accordance with the International Roughness Index: good ≤6; 6< fair ≤8; 8< poor ≤10; and very poor >10.

16 In the 2005-2012 period, the regional governments executed 60% of their budget, as did local governments in the 2007-2012 period, revealing a limited capacity for management.

17 Local governments are classified from I to IV, with level I designating those with the least capacity. To monitor these capacities, PVD periodically gathers information on variables associated with: (i) political support for road management; (ii) strategic planning; (iii) operational road planning; (iv) administrative and financial management; (v) technical and operational management; and (vi) human resource management. In 2008, 88% of all local governments were at levels I and II; this figure decreased to 45% in 2013, signaling improved capacities. A significant number of local governments, however, still have limited capacity, which this program will aim to remedy.

18 Project completion report.

19 As reflected in the Transportation Sector Framework Document (document GN-2740), there is a correlation between investment in transportation infrastructure, competitiveness, and economic growth. Growth occurs when costs fall and travel times are shortened, which makes production more efficient.

multiple causes, a perennial factor is deficient road infrastructure,[20] including infrastructure for local roads.

1.11 **IDB participation in the road sector and lessons learned.** In conjunction with the World Bank, and starting in 1995, the Bank supported an intervention involving 16,000 kilometers of local roads as a key action in the fight against poverty. Roads were rehabilitated and successes were achieved, such as the formation of road maintenance microenterprises,[21] with significant attention to gender equity and actions through a local development window. Table 2 shows lessons learned from the IDB's experience with local road programs throughout the region.

Table 2. Lessons learned and their incorporation in program design

Major lessons learned	Incorporation in program design
Decentralized management is essential for prioritizing investments tailored to local needs.	The program calls for developing regional and local governments for effective road management, as well as for developing the capacities of PVD.
Disbursements in previous programs were delayed because some of the works to be financed were commissioned by local governments.	The works to be commissioned by local governments will be financed with local counterpart resources. Only works directly commissioned by PVD will be financed with proceeds from the loan.
Delays in completing the design work for local roads cause delays in execution.	The works to be executed in the program's initial years have already been designed. Meanwhile, the design work for later works is underway.
Technical specifications for design work should reflect traffic levels on roads to ensure that the program interventions are economically viable.	The economic evaluation takes into account various traffic levels, and both the sample projects and the Program Operating Manual contain revised technical specifications based on the results of the latest operations.
To optimize the useful life of infrastructure and the sustainability of the investment in roads, routine and periodic maintenance is needed.	The program includes a specific maintenance plan suited to the characteristics of the roads targeted in the intervention. Each improved road will immediately enter a maintenance plan.
The development of road maintenance microenterprises has been satisfactory for routine maintenance. These microenterprises have also generated other benefits, such as the creation of local jobs and community development.	Microenterprises will continue to be used for local maintenance and will be supported.
Other maintenance models are more appropriate for high-capacity roads or for areas with a road density that justifies the use of contractors.	A service-level maintenance pilot initiative will be used in areas with a high concentration of roads targeted in the intervention.

[20] Since connectivity of municipios is a poverty factor (Candia and Evia, *Bolivia: Financiación y arreglos institucionales para retirar barreras a los caminos de los pobres*, 2011), the empirical evidence shows that intervention in infrastructure is essential to facilitating integration of rural areas (Pinstrup-Andersen and Shimokawa, 2006).

[21] Road maintenance microenterprises are formed by residents living near the rehabilitated roadways and are provided training on aspects of maintenance and on administrative and accounting management. They were initially hired directly by PVD but are now selected through a competitive process.

Major lessons learned	Incorporation in program design
It is important to have a management system that allows the program components to be effectively coordinated and programmed.	The program has an executing agency with experience in designing and executing local road programs. Capacity-building to serve the increased needs of the new program is being taken into account.
It has proven useful to carry out complementary activities for local development, making use of the physical transformation of the beneficiaries' area of influence.	In addition to maintaining support for the business plans of producers benefitted by the program, the value chain of products associated with the roads will be analyzed to create opportunities to improve the logistics chain.

1.12 The program impact evaluations showed that the beneficiary populations experienced an improvement in their living conditions. The impact evaluation for the Decentralized Rural Transportation Program (1810/OC-PE) shows that the rehabilitation of local roads helped reduce extreme poverty by 10 percentage points and helped reduce poverty caused by unmet basic needs by 7 percentage points.[22] In addition, the programs helped create an institutional structure in the provincial municipios, in the form of the Provincial Road Institutes.[23]

1.13 **Development of the Subnational Transportation Support Program based on the Peruvian government's strategy.** The program is based on the priorities set by the Peruvian government in its 2012-2016 Multiyear Strategic Plan for the Transportation and Communications Sector[24] (PESEM) and the 2011-2016 Investment Plan.[25] The PESEM prioritizes investments that contribute to (i) the decentralization process, aimed at capacity development, to improve transportation management in subnational governments, and in this regard this operation will support efforts to build and strengthen the capacity of local governments (paragraph 1.26) and the executing agency (paragraph 1.34); (ii) safe, efficient, quality transportation services for social inclusion; and (iii) strengthened internal and external integration and development of logistics corridors. The investment program, in addition to allowing for a more active social inclusion intervention on this basis, prioritizes intervention in local roads that serve as feeder routes for the logistics corridors.

1.14 The program will include two types of interventions in local road infrastructure: (i) social inclusion roads as part of the work of FONIE (paragraph 1.3), aimed at improving people's access to basic services and markets; and (ii) development of

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22 Other indicators in the impact evaluation are improvements in travel times: (i) to the provincial and departmental capitals; (ii) to schools; (iii) to health clinics; (iv) to places of employment; and (v) to points of sale for agricultural products. This likely reflects the fact that the amount of time that local roads were closed decreased (by 21.25 days per year).

23 The Provincial Road Institutes are technical agencies of local governments that carry out certain aspects of road management.

24 PESEM 2012-2016.

25 Investment Program 2011-2016, Strategic Management – Logistics Corridors.

feeder roads for five logistics corridors prioritized by the MTC.[26] Rehabilitation of these roads is aimed at making the products transported on them more competitive. Figure 1 shows the five logistics corridors prioritized by the MTC. Figure 2 shows the areas of poverty prioritized by FONIE for infrastructure interventions.

1.15 **Rationale for the Bank's participation.** The program is aligned with the Bank's country strategy with Peru (document GN-2668) in that it will improve the local road network and have a significant impact on the fight against poverty. Not only will it expand the coverage of the road network in good condition in high-poverty areas, but it will also improve feeder routes of logistics corridors and strengthen the decentralized management of the local road network. To maximize the benefits of the program, local development actions will be carried out: (i) to strengthen the fight against poverty through support for local communities to implement business plans for productive activity; and (ii) to analyze value chains in the road infrastructure in order to strengthen logistics corridors.

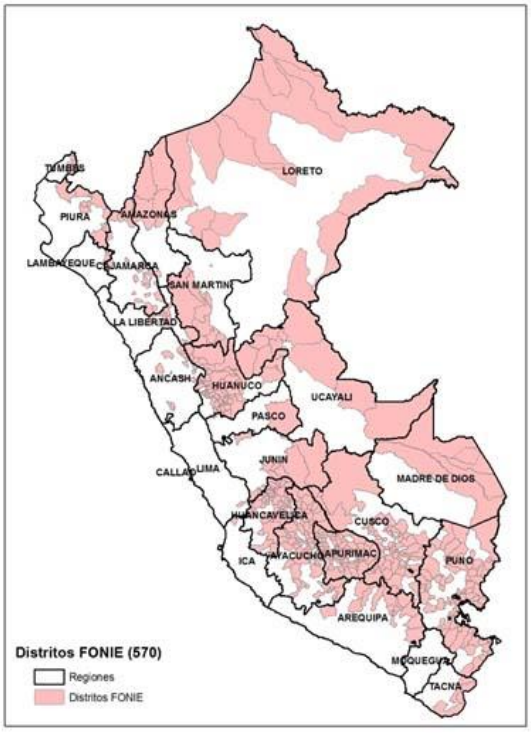
1.16 Although multilateral banks will finance just 16.6% of the total amount of the program (the IDB and the World Bank will each finance 8.3%, paragraph 1.35), the Peruvian government has asked the Bank to participate given the value added that it represents in terms of technical support for the program.

1.17 **Coordination with other institutions.** Multilateral institutions have been actively financing the road sector (paragraph 1.11), with the joint participation of the World Bank and the IDB. This program maintains the framework of joint action coordinated between the two institutions, including preparation missions by both. PVD, as part of its role in supporting economic infrastructure, coordinates closely with various local governments and with Ministry of Development in Social Inclusion (MIDIS), the Ministry of Economy and Finance (MEF), and the Ministry of Women and Vulnerable Populations (MIMP).

[26] The following corridors were selected: C1: Chiclayo–Tarapoto; C5: Matarani–Inambari; C8: Cusco–Puerto Maldonado–Iñapari; C11: Cusco–Desaguadero; and C12: Tarapoto–Aucayacu–Tocache–Tingo Maria (see optional electronic link #6).

Figure 1. Logistics corridors prioritized by the MTC

Figure 2. Areas of poverty prioritized by FONIE



1.18 **Strategic alignment of the program.** The program will contribute to the poverty-reduction and equity-enhancement lending priority of the Ninth General Increase in the Resources of the Inter-American Development Bank (document AB-2764), as it will intervene in areas identified for increased access to basic services for excluded populations and for poverty reduction (paragraph 1.22). It will also contribute to: (i) the regional goal for paved road coverage (km/km^2), in that it will finance road construction, improvement, and/or expansion and rehabilitation, thereby reducing transportation costs and building a dense transportation network to break the geographic isolation of entire communities; and (ii) the output indicator of kilometers of interurban roads built, maintained, or improved, as set forth in the results framework. The program is also aligned with the Sustainable Infrastructure for Competitiveness and Inclusive Growth Strategy (document GN-2710-5), as it will help: (i) promote access to infrastructure services; (ii) support the construction and maintenance of an environmentally and socially sustainable infrastructure; and (iii) promote ongoing improvements in infrastructure governance. It is aligned with the Transportation Sector Framework Document (document GN-2740-3) in that it contributes toward the following dimensions of success in transportation: (i) quality transportation infrastructure and services, with broad coverage; (ii) developed, efficient logistics networks; and (iii) institutions with the capacity to generate and implement sector policies and to execute and monitor projects.

1.19 In view of the need to address gender equity as a social inclusion factor in accordance with the Bank's institutional strategy, technical assistance resources (RG-T2618 – ATN/OC-15006-RG) will be used in this operation to explore sector-specific opportunities[27] to engage women in nontraditional work in the sector, as well as opportunities to generate more information on the quantitative and qualitative effects of women's participation in this sector. Although the percentage of women in the workforce rose to 64.5% in 2012 (compared with 82.2% of men), women are still more likely than men to be unemployed (4% versus 3% in 2012), they are disproportionately represented in the informal sector (66.7% versus 52.7% in 2012), and their wages average 18.3% less than men's wages.[28] It should also be noted that women's participation in the transportation and construction sectors is among the lowest in the region (9% and 4%, respectively, in 2014).[29]

B. Objectives, components, and cost

1.20 The objectives of the program are: (i) to facilitate sustainable road access for Peru's rural population to basic services, jobs, and markets in order to help reduce poverty; and (ii) to help make the country more competitive by reducing transportation costs on local roads associated with priority logistics corridors. The specific objectives are: (i) to help reduce vehicle operating costs; (ii) to help reduce travel times; and (iii) to help strengthen decentralized road management.

1.21 **Component 1. Local road infrastructure for integration and social inclusion (US$405.73 million).** This component will finance civil works for road rehabilitation and improvement,[30] supervision of the works, and related studies (preinvestment and final). The works will entail technological improvements in low-cost paving[31] and road safety (paragraph 1.24). The physical target of roads to be rehabilitated is 2,200 kilometers, with two types of roadways to be targeted by interventions, in accordance with prioritization criteria for social inclusion (paragraph 1.22) or for the integration of roads into logistics corridors (paragraph 1.23).

1.22 **Subcomponent 1.1. Infrastructure for social inclusion (US$169.67 million).** This component will finance 1,100 kilometers of local roadways in areas of poverty prioritized by the MIDIS (paragraph 1.2) and in accordance with the Operating Manual. The selected roads (paragraph 1.38) will improve access for communities

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27 As part of the potential sector-specific opportunities, the plan is to promote an open dialogue with the private sector, and specifically with work contractors, to understand how they perceive gender issues and to identify possible lines of work.

28 Roads to Agency: Effects of Enhancing Women's Participation in Rural Roads Projects on Women's Agency. World Bank, 2015, Washington, D.C.

29 Internally calculated using data from 2013 and 2014 household surveys. Transport Division, IDB.

30 Project engineering, particularly masonry structures and drainage features such as curbs, sewers, and ditches, will be reviewed in anticipation of more adverse weather conditions. Climate stressors such as an increase in extreme rain have an impact on road conditions. Weak drainage capacity and an increase in flood events limit the serviceability of roads throughout the year. Climate projections and possible impacts in the transportation sector: The Economics of Climate Change in Peru: Impacts on Road Infrastructure, IDB and the Economic Commission for Latin America and the Caribbean (2015).

31 In previous projects, the rehabilitation work consisted of surfacing the roads (gravel). In the proposed program, the interventions will improve the roads by applying a chemically stabilized layer and in some cases by laying low-cost pavement over the riding surface.

to basic public services such as health care and education, as well as to greater market and job opportunities, thereby helping reduce poverty in rural areas.

1.23 **Subcomponent 1.2. Integration of local roads with logistics corridors (US$236.06 million).** This component will finance 1,100 kilometers of local roadways that connect to logistics corridors prioritized by the MTC (paragraph 1.14) and in accordance with the Operating Manual. The selected roads (paragraph 1.39) will enhance producer competitiveness by lowering transportation costs incurred in moving products to domestic and international markets, thereby promoting economic development in rural areas.

1.24 **Road safety.** The works under this component will incorporate signage and road safety features appropriate for these types of roads, particularly in areas where the roads traverse populated areas, and include such items as speed bumps, guardrails, and road signs and markings.

1.25 **Component 2. Maintenance of local road infrastructure (US$151.88 million).** This component will finance the technical documentation for periodic maintenance interventions, periodic maintenance works, and routine maintenance activities. For a number of roads that were rehabilitated under previous programs (paragraph 1.11) and require regular maintenance, in accordance with the stipulations of the Operating Manual, consideration will also be given to improving the road surface through the use of stabilizers or low-cost pavement. The roads selected for rehabilitation and improvement as part of this program (paragraph 1.40) will also have ongoing maintenance beyond the program execution period. This program introduces a pilot initiative for service-level maintenance on 450 kilometers of roads rehabilitated under previous programs.[32] The rest of the roads rehabilitated in previous programs will continue to receive traditional maintenance from road maintenance microenterprises, financed by transfers from the MEF to local governments.[33] The Bank will participate by financing all subcomponents except for routine maintenance, which will be wholly financed under the local counterpart contribution.

1.26 **Component 3. Decentralized road management (US$26.69 million).** This component will finance: (i) the institutional development of regional and local governments for effective road management; (ii) capacity-building at PVD to strengthen the executing agency and ensure effective execution of the program; (iii) capacity-building at microenterprises to conduct routine maintenance; (iv) the

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[32] For the system of maintenance by levels of service, a contractor performs initial works to improve a road and then continues with maintenance activities for a period of time. Payment is made for the fulfillment of levels of service, not for work performed. This approach may have advantages insofar as the investment is not separated from maintenance and the contractor has more responsibilities in terms of road management, but it requires contractors with greater technical capacities. Consideration will also be given to the possibility of combining this approach with the participation of road maintenance microenterprises.

[33] Once this program has been completed, the financing for road maintenance will be added to the resources that the MEF allocates to local governments for this purpose.

activities of logistics and local development windows; and (v) program monitoring and evaluation.[34]

1.27 To improve the capacities of local governments, the program will include two levels of capacity-building. For local governments that will execute works in a decentralized manner, PVD will provide direct technical assistance. For local governments that will not execute works in a decentralized manner, specific training will be provided for certain key aspects of the road management cycle.

1.28 Also, intensive efforts must be made to promote the creation of rural road maintenance microenterprises and strengthen their technical capacities because the roads targeted for intervention will be subject to higher quality standards that will require more specialized capacities for maintenance purposes.[35] Capacity-building activities will be based on three elements: (i) training of microenterprises for accreditation purposes; (ii) implementation of results-based evaluation systems; and (iii) implementation of an institutional framework for monitoring microenterprises. The training is expected to help the microenterprises expand and enhance certain aspects, such as effective environmental management in road maintenance and collection of accident data for the roads for which they are responsible.

1.29 The activities of the logistics and local development windows are intended to strengthen the impact of road investments on building competitiveness and reducing rural poverty by promoting the active participation of local governments, in partnership with other public and private sector actors, in the implementation of public policies for local economic development.

1.30 To implement the local development window, a number of consulting firms will be hired, and their primary activities will be: (i) to support local governments in preparing their local economic development plans and their projects for public investment in production; (ii) to support local governments in identifying and prioritizing policy measures to improve local productive development; (iii) to identify and prioritize business plans for small private producers; (iv) to support the preparation of business plans; and (v) to support efforts to seek financing both for business plans and for local governments' potential public investment projects related to productive development. The local development window will be implemented in approximately 12 priority provinces.[36]

1.31 Implementation of the logistics development window will be similar to that of the local development window (paragraph 1.30), but the topics to be addressed will be geared toward making the products more competitive. The consulting firms

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[34] The monitoring and evaluation costs are included in this component, since the results of these evaluations will serve as input to PVD for improving the design of its programs. This will enhance capacity at PVD to improve its future interventions.

[35] The microenterprises to be trained are located in areas near the roads to be rehabilitated under this program. If new microenterprises need to be formed due to the location of a road, the microenterprise will be subject to the new training system.

[36] To select the provinces that will participate in the local development window and the logistics development window, the executing agency is mapping the location of programs that finance productive development activities. The executing agency will use this information to prioritize provinces in which other programs may potentially finance the interventions.

supporting the local governments that participate in the logistics development window will perform activities (i) and (ii) of the local development window and will also: (i) identify and prioritize bottlenecks in value chains; (ii) identify and prioritize bottlenecks in logistics services associated with the relevant products; (iii) support the preparation of studies to remedy logistics and value-chain bottlenecks; and (iv) seek financing for the prioritized activities. The logistics development window will be implemented in approximately 12 priority provinces.

1.32 **Gender-related actions.** The following activities will be carried out: (i) an analysis of the value chain for the implementation of road infrastructure, for the purpose of identifying opportunities for the inclusion of women; (ii) a pilot intervention to raise awareness among communities about the benefits of including women in the labor market; and (iii) a study to measure the impacts of women's participation in the microenterprises, for the purpose of quantifying the effects of their participation.[37] In addition, building on the gender-related progress achieved in previous programs (paragraph 1.11), this program will continue to promote women's participation in road maintenance activities by including them in the rural microenterprises that perform routine road maintenance.

1.33 **Other specific road-safety actions.** In addition to the road safety features and actions to be implemented for the infrastructure in Component 1 (paragraph 1.24), two specific actions will be carried out: (i) an ongoing dissemination and training process for drivers, pedestrians, and residents living near the road to inform them of preventive road safety actions and warn them of the hazards they may face; and (ii) a mechanism for collecting accident data for roads rehabilitated under the program, which may involve the road maintenance microenterprises.

1.34 **Program management (US$15.7 million).** This component will finance the program subcomponent for administrative management, which is part of the administrative and operational expenses of PVD, using local counterpart resources. PVD is in the midst of a reorganization process to adapt its organizational structure to the various roles it performs. As part of this component, PVD is planning to hire personnel in various areas to help it execute its programs effectively.[38] In addition, the Bank will participate in the financing for the external audit of the program.

1.35 **Amount and structure of financing.** The program's total cost is US$600 million, of which US$50 million will come from the Ordinary Capital of the IDB. The World

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[37] The value chain study will be financed as part of technical-cooperation operation RG-T2618, ATN/OC-15006-RG. This pilot initiative will be financed by the project, the communities for execution of the pilot initiative will then be selected, and the possibility of including it in the impact evaluation for the project will be considered.

[38] Counterpart resources will be used to hire four people for program coordination, eight people for the Management Unit, four people for the Departmental Transportation Management Unit, four people for the Rural Transportation Management Unit, three people for the Administration Management Unit, six people for the Institutional Development Management Unit, nine people for the Environmental Unit, three people for the General Office of Social and Environmental Affairs, and nine people for the Regional Coordination Offices. These additional personnel will not be part of the executing agency's staff because the executing agency is a line agency and its organization and size are regulated. These individuals will be temporary support personnel for the purposes of effective program implementation.

Bank[39] will contribute an additional US$50 million in parallel financing to the program. The borrower will make a local counterpart contribution of US$500 million. Table 3 details the costs and financing.

1.36 **Representative sample.** To evaluate and implement the program, an analysis has been carried out of a representative sample of approximately 30% of the cost of Component 1, consisting of 931 kilometers of local roads for which preliminary engineering and economic studies and environmental and social assessments have been prepared (optional electronic link #3).

Table 3. Costs and financing (US$ millions)

Components		IDB		Parallel (WB)		Local		Total
		US$	%	US$	%	US$	%	US$
1	**Local road infrastructure for integration and social inclusion**	**35.0**	**8.6**	**35.0**	**8.6**	**335.73**	**82.7**	**405.73**
1.1	Infrastructure for social inclusion	27.72	16.3	27.72	16.3	114.23	67.3	169.67
1.2	Integration of local roads with logistics corridors	7.28	3.1	7.28	3.1	221.5	93.8	236.06
2	**Maintenance of local road infrastructure**	**10.0**	**6.6**	**10.0**	**6.6**	**131.88**	**86.8**	**151.88**
2.1	Technical documentation for road maintenance	1.65	50.2	1.65	50.2	0	0	3.29
2.2	Periodic road maintenance	6.25	7.7	6.25	7.7	68.16	84.5	80.65
2.3	Routine road maintenance	0	0	0	0	34.53	100.0	34.53
2.4	Pilot initiative by service levels	2.11	6.3	2.11	6.3	29.19	87.4	33.41
3	**Decentralized road management**	**4.65**	**17.4**	**4.65**	**17.4**	**17.39**	**65.2**	**26.69**
3.1	Capacity-building for regional and local governments	1.15	14.4	1.15	14.4	5.7	71.3	8.0
3.2	Institutional capacity-building for PVD	0.5	15.7	0.5	15.7	2.19	68.7	3.19
3.3	Capacity-building for microenterprises for routine maintenance	1.0	25.0	1.0	25.0	2.0	50.0	4.0
3.4	Logistics and local development windows	1.0	13.3	1.0	13.3	5.5	73.3	7.5
3.5	Monitoring and evaluation	1.0	25.0	1.0	25.0	2.0	50.0	4.0
	Program management	**0.35**	**2.2**	**0.35**	**2.2**	**15.0**	**95.5**	**15.7**
	Administrative management	0	0	0	0	15.0	100.0	15.0
	External auditing	0.35	50.0	0.35	50.0	0	0	0.7
	Total	**50**	**8**	**50**	**8**	**500**	**83**	**600**

1.37 **Eligibility criteria.** The roads to be rehabilitated and maintained must meet various selection criteria, depending on whether they are for the subcomponent of roads for integration and social inclusion (paragraph 1.22) or the subcomponent for

[39] This refers to the International Bank for Reconstruction and Development (IBRD). The parallel financing is independent of the local counterpart contribution in terms of fulfillment of the objectives and activities set out in this proposal.

the integration of roads with logistics corridors (paragraph 1.23). In either case, the roads must meet the following eligibility criteria: (i) fulfillment of the requirements set forth in the Environmental and Social Management Report (ESMR) (required electronic link #3); (ii) an economic internal rate of return (EIRR) greater than 12%; and (iii) no significant social or environmental impacts.

1.38 The road segments selected for the subcomponent focusing on roads for integration and social inclusion will be prioritized according to the following selection criteria: (i) roads located in areas prioritized by the FONIE; (ii) roads connecting to a significant number of basic services (clinics and schools); (iii) roads connecting to a significant number of population centers, providing market access to as much of the rural population as possible; and (iv) road segments 10 kilometers or longer.

1.39 Meanwhile, for the subcomponent focusing on integration with logistics corridors, roads connecting to the five prioritized corridors will be selected (paragraph 1.14). In addition, the following selection criteria must be met: (i) roads associated with value chains for prioritized products that account for the largest production volume and generate the largest amount of freight; and (ii) road segments longer than five kilometers that are associated with the route used to move products (feeder network for the logistics corridor) from centers of production to points of sale (market).

1.40 The road segments to be included under the maintenance component must meet the following criteria: (i) roads located in FONIE's area of influence and the logistics corridors; (ii) roads targeted for intervention in previous programs and which are in good or fair condition; and (iii) roads targeted for intervention in previous programs and which are no more than seven years old as of the contract settlement date.

C. Key results indicators

1.41 The program is designed to obtain the following key results, which will be evaluated in accordance with the indicators set forth in the results matrix (see Annex II): (i) reduced travel times; (ii) reduced annual vehicle operating costs; (iii) an average daily index that reflects traffic levels on the roads; indicators of enhanced capacities of local governments; and (iv) indicators of improved conditions with respect to employment in the area of influence of the road segments targeted in the intervention. The output and outcome indicators will be verified directly and compared against the values listed in the results matrix. The program will also include preparation of an impact evaluation (paragraph 3.10).

1.42 **Technical and economic viability.** An economic evaluation (optional electronic link #4) was conducted for the projects in the representative sample from Component 2. The economic evaluation yielded an economic net present value (ENPV) of US$71.7 million and an economic internal rate of return (EIRR) of 17.86%. A sensitivity analysis of economic viability indicators was run using three cost-benefit scenarios. This analysis found that the program would have a positive return and would remain economically viable even with a 10% increase in general costs or a 10% decrease in benefits. The economic evaluation assumed a social discount rate of 12%, although the official rate used by Peru's national system of public investment is 9%. The 9% rate would improve the viability indicators.

Table 4. Indicators of economic viability

Baseline analysis		10% increase in costs		10% decrease in total benefits		10% increase in costs and 10% decrease in benefits	
ENPV (US$ million)	EIRR	ENPV (US$ million)	EIRR	ENPV (US$ million)	EIRR	ENPV (US$ million)	EIRR
71.7	17.86	28.5	14.1	20.9	13.73	-22.3	10.3

1.43 **Program beneficiaries.** The direct beneficiaries will be all residents of population centers located close to the targeted roads, who will benefit from: (i) shorter transportation times and improved serviceability year-round; (ii) the ability to sell their products in less time and at more competitive transportation costs; (iii) the ability to obtain inputs at a lower cost; and (iv) access to basic services in the form of health care and education. Based on data from the National Statistics and Informatics Institute (INEI), the road segments selected for the integration and social inclusion subcomponent (paragraph 1.22) could benefit an estimated 310,000 people along 37 segments located in 11 departments, 26 provinces, and 38 districts. For the road segments selected in the subcomponent for the integration of roads with logistics corridors (paragraph 1.23), the estimated number of beneficiaries according to INEI data is 780,000 people in 5 departments and 14 provinces. In addition, capacity-building activities are expected to benefit 194 local governments and 24 regional governments, and 150 microenterprises are expected to be certified for routine maintenance.

II. Financing Structure and Main Risks

A. Financing instruments

2.1 The proposed financing instrument is a multiple-works investment loan, as the program calls for independent projects for road rehabilitation and improvement pursuant to eligibility criteria (paragraphs 1.38 to 1.40) and includes a representative sample for evaluation and execution (paragraph 1.36). The disbursement period will be five years from the effective date of the loan contract. The tentative disbursement schedule is shown in Table 5 below:

Table 5. Tentative disbursement schedule (US$ millions)

Source	2016	2017	2018	2019	2020	Total	%
IDB	3.10	10.95	15.43	18.88	1.63	50	8.3
Parallel financing (World Bank)	3.10	10.95	15.43	18.88	1.63	50	8.3
Local contribution	14.61	46.6	143.12	226.79	68.89	500	83.3
Total	-	-	-	-	-	**600**	**100.0**

B. Environmental and social safeguard risks

2.2 On the basis of this document and in accordance with operational policy OP-703, the program has been classified as a category “B” operation. The program calls for

improving consolidated road segments that are located along existing corridors, have almost entirely secured rights of way, and are far from environmentally or socially sensitive areas. The negative impacts that will be generated are the typical ones associated with any road maintenance work, which are deemed to be of low to medium magnitude; temporary; reversible; concentrated in roadway work sites, camps, and industrial areas; and manageable using the usual management tools for this type of project. These impacts will be managed using not only the environmental and social management plans specific to each project, but also the three frameworks developed for this operation: (i) an environmental and social management framework[40]; (ii) an involuntary resettlement framework[41]; and (iii) a framework for relations with indigenous peoples.[42]

2.3 The ESMR (required electronic link #3) includes an analysis of associated environmental and social impacts, and compliance with the Bank's environmental policies has been verified. The ESMR details the impacts that will be generated during program works and operations, as well as the monitoring and supervision measures to be implemented during execution.

C. Fiduciary risks

2.4 Since PVD has extensive experience in execution projects with financing from the World Bank and the IDB, no significant fiduciary risks are expected. Some program works will be commissioned in a decentralized manner by local governments, but it has been agreed with the executing agency that these works will be financed with local counterpart resources. Medium-level fiduciary risks are cost variation (paragraph 2.6) and procurement delays, with the latter risk mitigated through the hiring of additional personnel to review studies, the creation of a program coordination unit, and technical assistance for procurement.

D. Other key issues and risks

2.5 **Execution and monitoring risks.** No works that are complex from an engineering standpoint are planned, and there is a large market of qualified construction and supervisory firms for the type of works to be financed. The executing agency, acting through PVD, has previously worked with multilateral banking institutions to successfully implement several similar programs (paragraph 1.11). The risks related to coordination between actors will be mitigated through the Operating Manual and agreements to be signed between PVD and the regional governments. Because the new program will result in increased workloads for PVD, it calls for personnel reinforcements[43] as part of program management (see footnote 38). This reorganization, along with implementation of a monitoring system, will also serve to mitigate the risk of limited monitoring of decentralized investment.

2.6 **Cost overrun risks.** To avoid the risk of cost overruns, the program has been designed in view of the complete life cycle of the works. Basic and final studies will

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40 Environmental and social management framework.

41 Involuntary resettlement framework.

42 Framework for relations with indigenous peoples.

43 To avoid the risks of political interference in human resource management at PVD and in the local governments, the investment program will be determined at the project level and the personnel of local governments will be trained and accredited.

be conducted of the roads targeted for intervention before the works are placed for bid and executed. PVD has the personnel needed to support the technical structuring of the project, the preparation of bid documents, execution, and contract management with special emphasis on controlling costs and quality throughout the life cycle of the work up until final delivery. In addition, the following mitigation measures will be taken: (i) designs and budgets will be updated prior to letting the works; (ii) price adjustment formulas will be incorporated; and (iii) prior to starting a work, supervision of the work will be arranged and proof of legal ownership, easements, or rights of way to begin construction will be demonstrated. All of these measures reduce the likelihood that: (i) the bids will exceed the estimated budget due to a lack of detail in the designs; (ii) substantial changes will occur in the design and/or in work quantities during construction; and (iii) the timetables for the works will be extended as a result of revisions to the design and/or increased quantities. Previously, an increase in unit costs occurred just once, with the last program implemented, after the country's economic growth drove up the unit prices of the main inputs for construction. Despite this, the original target for roadway rehabilitation was exceeded.

2.7 **Sustainability of investments.** PVD will be responsible for maintaining the road works financed through this program. PVD has compiled a list of interventions from previous programs and has a maintenance plan that follows the schedule of activities for sustainability of the roads targeted for intervention. Each year, the MEF transfers resources directly to the local governments that have rehabilitated roads so that they may perform the appropriate road maintenance, which is accomplished using road maintenance microenterprises. PVD is the entity responsible for coordinating with the MEF on the resources needed for maintenance purposes, as well as for verifying that the maintenance is being done in accordance with specific technical standards. Component 2 also includes resources for routine maintenance of the roads to be rehabilitated in this program.

III. IMPLEMENTATION AND MANAGEMENT PLAN

A. Summary of implementation arrangements

3.1 **Borrower and executing agency.** The borrower will be the Republic of Peru, and the executing agency will be the Ministry of Transportation and Communications (MTC), acting through Provías Descentralizado (PVD). PVD is a line agency of the MTC that performs a number of tasks in addition to execution of this program. To execute this program, PVD will form a program coordination team, which will coordinate the actions of the various units. Also to be formed is a working group that will be known as the Program Management Committee, consisting of PVD, MTC, and MEF representatives, who will coordinate program actions with other actions by the Peruvian government in relation to local road rehabilitation and improvement.[44]

[44] The management committee will have no direct impact on program execution, but it will serve to ensure that program actions are coordinated with other actions by the Peruvian government on aspects of local road maintenance and rehabilitation.

3.2 Some works procurement processes will be carried out by local governments, especially for certain works under Subcomponent 1.1 and some under Component 2. The only local governments that may conduct procurement processes are those that have sufficient capacity and in accordance with the criteria set out in the Operating Manual. Procurement processes conducted by local governments will be wholly financed by resources from the local counterpart contribution and will be subject to local procurement laws and regulations. Still, PVD will be responsible for all activities related to overall program management, implementation, and monitoring.

3.3 During program implementation, agreements will be signed between the MTC and the local governments for the transfer of resources from the former to the latter. In the case of previous programs, two agreements were signed: a participation agreement and a financial agreement. However, for this program, the plan is to use a single agreement covering all elements.

3.4 For financial and accounting administration of resources such as disbursements, as well as for fund administration and account management, the executing agency will be responsible for programming the operation and doing whatever is needed to ensure proper execution of program components, procurement processes, financial administration, and monitoring and evaluation of results. The executing agency will have the following and other duties: (i) prepare a program execution plan (required electronic link #1) and the corresponding annual work plans; (ii) prepare and update the procurement plans (required electronic link #4); (iii) prepare the bid documents for the procurement of consulting services, goods, and works in accordance with the Bank's procurement policies; (iv) monitor the technical, administrative, and financial aspects of the contracts; (v) prepare the technical documentation for the projects; (vi) ensure availability of the program's accounting and financial records on the source and use of program resources, in accordance with the loan contract, and submit documentation to justify expenses; (vii) prepare the financial statements and disbursement requests; (viii) monitor and evaluate program execution; (ix) monitor and evaluate the output and outcome indicators; and (x) perform any other functions specified in the Operating Manual.

3.5 **Program Operating Manual.** The Operating Manual will include at least the following elements: (i) the terms, conditions, and role of the program executing agency; (ii) the eligibility criteria for project financing under the program; (iii) the technical, social and environmental, and fiduciary procedures (paragraph 2.4); (iv) institutional arrangements; (v) standards of performance and monitoring set forth in the Environmental and Social Management Plan (ESMP); (vi) the content of the agreements to be signed with the local governments that participate in the program; and (vii) the mechanisms for transferring resources to the local governments, and reporting requirements. **As a contractual condition precedent to the first disbursement of the loan, the executing agency, acting through PVD, will approve the Program Operating Manual under the terms previously agreed upon with the Bank.**

3.6 **Procurement of goods, works, and services.** Procurements will be governed by the loan contract and the Policies for the Procurement of Goods and Works Financed by the Inter-American Development Bank (document GN-2349-9) and the Policies for the Selection and Contracting of Consultants Financed by the

Inter-American Development Bank (document GN-2350-9). The provisions of the loan contract and procurement plan (Annex III), which establish the type of review, processes, and monitoring of procurements under the program, will also be followed. The Bank will conduct ex ante reviews of all procurement processes. As stated in paragraph 3.2, any procurement processes conducted by local governments will be wholly financed by local counterpart resources and will be subject to local procurement laws and regulations.

3.7 **Disbursements.** The loan will be disbursed in the form of fund advances, with the frequency of these payments to be determined by the program's financial programming, to be periodically updated by the executing agency. The Bank may release a new advance of funds once 80% of all funds disbursed in the form of advance payments have been justified. Disbursement requests will be subject to ex post review.

3.8 **Auditing.** The borrower, acting through the executing agency/execution unit, will select and hire a level I or II independent auditing firm in accordance with Bank policies and for the entire project execution period, including any extensions of the disbursement period. Annual and final audited financial statements will be delivered in accordance with Annex III, Fiduciary Agreements and Requirements.

B. Summary of arrangements for monitoring results

3.9 The monitoring and evaluation plan (required electronic link #2) will be used in executing the operation in accordance with the indicators and targets set out in the results matrix. For monitoring activities, the following instruments will be used: (i) semiannual reports showing progress achieved in each component and overall program performance based on the indicators in the results matrix; monitoring of physical and financial execution based on the annual work plan, the program execution plan, and the procurement plan, as well as monitoring of disbursements; and fulfillment of recommendations from the external audit; (ii) audited financial statements; and (iii) the program completion report. The Bank will monitor the program through inspection visits and administrative missions. The monitoring and evaluation plan will be coordinated by the executing agency, which will maintain appropriate systems for periodically compiling data on physical and financial progress and will have up-to-date information on the program.

3.10 To evaluate the expected results of the program, an impact evaluation will be conducted to compare specific indicators for the road segments targeted by the intervention against the same indicators for control segments (optional electronic link #5), and an ex post economic evaluation, based on the model developed for the ex ante economic evaluation, will be conducted within the final six months of the original disbursement period or any extensions. The impact evaluation will be based primarily on the use of experimental methods or on random allocation to generate the most rigorous possible counterfactual scenarios for this type of evaluation. Unlike in previous programs, other impacts related to the work will be measured as well, such as those under Component 3 regarding the activities of the local development window or intensive training of road maintenance microenterprises. For the strengthening of decentralized road management in local governments, the most cost-effective mechanisms will be sought, and to this end the impact of differentiated delivery models for strengthening decentralized road management will be measured.

Development Effectiveness Matrix			
Summary			
I. Strategic Alignment			
1. IDB Strategic Development Objectives	Aligned		
Lending Program	-Lending for poverty reduction and equity enhancement		
Regional Development Goals	-Paved road coverage (Km/Km2)		
Bank Output Contribution (as defined in Results Framework of IDB-9)	-Km of inter-urban roads built or maintained/upgraded		
2. Country Strategy Development Objectives	Aligned		
Country Strategy Results Matrix	GN-2668	i) Improve accessibility, ii) Improve the condition of the national road network.	
Country Program Results Matrix		The intervention is not included in the 2015 Operational Program.	
Relevance of this project to country development challenges (If not aligned to country strategy or country program)			
II. Development Outcomes - Evaluability	Highly Evaluable	Weight	Maximum Score
	9.6		10
3. Evidence-based Assessment & Solution	9.7	33.33%	10
3.1 Program Diagnosis	3.0		
3.2 Proposed Interventions or Solutions	4.0		
3.3 Results Matrix Quality	2.7		
4. Ex ante Economic Analysis	10.0	33.33%	10
4.1 The program has an ERR/NPV, a Cost-Effectiveness Analysis or a General Economic Analysis	4.0		
4.2 Identified and Quantified Benefits	1.5		
4.3 Identified and Quantified Costs	1.5		
4.4 Reasonable Assumptions	1.5		
4.5 Sensitivity Analysis	1.5		
5. Monitoring and Evaluation	9.0	33.33%	10
5.1 Monitoring Mechanisms	1.5		
5.2 Evaluation Plan	7.5		
III. Risks & Mitigation Monitoring Matrix			
Overall risks rate = magnitude of risks*likelihood	Medium		
Identified risks have been rated for magnitude and likelihood	Yes		
Mitigation measures have been identified for major risks	Yes		
Mitigation measures have indicators for tracking their implementation	Yes		
Environmental & social risk classification	B		
IV. IDB´s Role - Additionality			
The project relies on the use of country systems			
Fiduciary (VPC/FMP Criteria)	Yes	Financial Management: External control.	
Non-Fiduciary	Yes	Monitoring and Evaluation National System.	
The IDB's involvement promotes additional improvements of the intended beneficiaries and/or public sector entity in the following dimensions:			
Gender Equality	Yes	The following activities will be carried out: i) an analysis of the gender gaps throughout the value chain of road infrastructure construction to detect which specific tasks are most in need of mechanisms to promote women´s inclusion, ii) a pilot project to raise awareness about the benefits of integrating women into the labor market, and iii) a study to measure the impact of women´s participation in microenterprises.	
Labor			
Environment			
Additional (to project preparation) technical assistance was provided to the public sector entity prior to approval to increase the likelihood of success of the project	Yes	Approval and execution of Technical Cooperation PE-T1305, which supported: (i) feasibility studies for the program; (ii) studies and pilot projects for the implementation of new components (road safety, conservation by service levels); and (iii) development of tools to facilitate the rapid start of the implementation of the program.	
The ex-post impact evaluation of the project will produce evidence to close knowledge gaps in the sector that were identified in the project document and/or in the evaluation plan	Yes	The impact evaluation will make several contributions to the global literature in transport: (i) the use of experimental methods to evaluate the infrastructure component ; (ii) the quantification of impacts generated by complementary interventions, such as the windows of local development, in addition to the impacts of infrastructure; (iii) the experimental evaluation of training programs directed to microenterprises and the effects on its members and the state of the roads; (iv) the experimental study of pilots that seek to strengthen decentralized road management, which will inform about the most appropriate methods to reinforce local capacities.	

The overall objective of the program is: (i) to facilitate sustainable road access to basic services, employment, and markets for the rural population of Peru to contribute to poverty reduction; and (ii) to help improve the country's competitiveness by reducing transportation costs in rural roads connected to priority logistics corridors. The specific objectives are to: (i) contribute to the reduction in vehicle operating costs; (ii) the reduction of travel times; and (iii) the strengthening of decentralized road management capacity.

The project has a complete diagnosis of the problems that the intervention seeks to attend and presents rigorous empirical evidence on the effectiveness of similar interventions that has both internal and external validity. In terms of the results matrix, the main indicators reported are SMART and contain means of verification. Given that some indicators will be constructed as part of the proposed impact evaluation of the program some of them lack baseline values.

The economic analysis of the operation is solid. The monitoring plan does not present the annual and total costs of products as they are reported in the results matrix. The evaluation plan proposes to use ex-post cost-benefit analysis and impact evaluation methodologies, particularly experimental approaches, which will contribute to close knowledge gaps of relevance to the transportation sector. Risks identified are sound, include mitigation measures, and metrics for monitoring.

RESULTS MATRIX

Objective. The objectives of the program are: (i) to facilitate sustainable road access for Peru's rural population to basic services, jobs, and markets in order to help reduce poverty; and (ii) to help make the country more competitive by reducing transportation costs on rural roads associated with priority logistics corridors. The specific objectives are: (i) to help reduce vehicle operating costs; (ii) to help reduce travel times; and (iii) to help strengthen decentralized road management.

Expected impacts of the program:	(i) Increase in household income (ii) Reduction in transportation costs	
Impact indicators	**Baseline**	**Target (2020)**
Average monthly per capita income of households in the area of influence of roads targeted for intervention[1]	2	2
Average transportation costs as a proportion of the total cost of products on prioritized chains in the network of targeted local roads that connect to logistics corridors (transportation costs / total product cost)	3	3

[1] The roads targeted for intervention include those from the social inclusion subcomponent and access roads to logistics corridors. The area of influence for each road may be considered, on a preliminary basis, to extend one kilometer from each side of the road. This figure will be specified at a later time. Also, the indicator will be disaggregated by gender. Income means all income, not merely employment-based income. In collecting data for this indicator, data will also be collected on intermediate indicators, such as employment, passenger fares, and indicators on access to health care and education.

[2] The baseline and target values for the indicator will be calculated once the baseline study for the program impact evaluation has been completed.

[3] The baseline and target values for the indicator will be calculated once the baseline study for the impact evaluation has been completed. The calculation method will estimate transportation costs as a proportion of the total cost of products in the prioritized chains on the network of local roads that connect to logistics corridors. The prioritized chains are those products that, due to their freight volume, were prioritized in the MTC's National Logistics Plan.

Expected outcomes:	Reduction in transportation costs (operating and travel) of users on roads targeted for intervention by the program.			
Outcome indicators	**Vehicle operating costs on roads targeted for intervention by the program[4] (US$/vehicle-kilometer)**			**Means of verification/comments**
		Baseline (2015)	**Target (2020)**	
Vehicle operating costs on roads targeted for intervention by the program	Cars	0.516	0.413	(HDM-4). Ex post evaluation report for the program –
	Buses	1.153	0.922	
	Trucks	2.651	2.121	
	Average	**1.440**	**1.152**	

[4] The indicator values, both for the baseline and at program completion, have been calculated using the HDM-4 model on roads for social inclusion and roads for connection to logistics corridors in the representative sample.

Outcome indicators	**Costs of travel times on roads to be targeted for intervention by the program[5] (US$/kilometer)**			**Means of verification/comments**
		Baseline (2015)	**Target (2020)**	
Costs of travel times on roads targeted for intervention by the program	Cars	0.064	0.045	HDM-4 Ex post evaluation report for the program
	Buses	0.512	0.358	
	Trucks	0.146	0.117	
	Average	**0.241**	**0.173**	

[5] The indicator values have been calculated using the HDM-4 model on roads for social inclusion and roads for connection to logistics corridors in the representative sample.

Expected outcomes:	Increase in traffic due to enhanced accessibility on road segments targeted for intervention		
Outcome indicators	**Traffic on roads targeted for intervention (number of vehicles per day)**		**Means of verification/comments**
	Baseline (2015)	**Target (2020)**	
Daily average traffic on roads for social inclusion[6]	33	36	This includes all types of vehicles and reflects the average across all road segments in the representative sample, weighted by the length of each segment. This will be verified using the supervisor's reports and the ex post evaluation report for the program
Daily average traffic on roads for access to logistics corridors	130	143	This includes all types of vehicles and reflects the average across all road segments identified in Subcomponent 1.2, weighted by the length of each segment. This will be verified using the supervisor's reports and the ex post evaluation report for the program.

[6] Daily average traffic is the average traffic that a road has in a day. Data are obtained through traffic counts.

Expected outcomes:	To enhance the capacities of local governments		
Outcome indicators	**Baseline (2015)**	**Target (2020)**	**Means of verification/comments**
% of local governments (targeted for intervention in the program) that prepare a transportation investment budget in their multiyear investment plan in a way that is consistent with the provincial road plan[7]	n/a[8]	70%	SIAF reports
% of local governments (targeted for intervention in the program) that have executed 80% of the physical and budgetary target of the multiyear road investment program	n/a[9]	70%	SIAF reports
Number of projects of local governments targeted for intervention by the program that have been financed and executed for development of logistics services and productive development, some in partnership with other institutions	n/a[10]	36	SIAF reports/published ordinances and resolutions of local governments

[7] Each province must have a provincial road plan that identifies and prioritizes the roads targeted for intervention. In accordance with this indicator, local governments should preferably invest in roads prioritized at the provincial level.

[8] The baseline will be subsequently determined on the basis of the processing of information from the SIAF reports on the sample of local governments targeted for intervention by the program, and will be calculated as follows: (Number of local governments to be targeted for intervention by the program that prepare a budget for investment in transportation in their multiyear plan in a way that is consistent with the provincial road plan/total number of local governments targeted for intervention by the program.) The target will be calculated in similar fashion, over the same sample of local governments used in calculating the baseline.

[9] The baseline will be subsequently determined on the basis of the processing of information from the SIAF reports on the sample of local governments targeted for intervention by the program, and will be calculated as follows: (number of local governments to be targeted for intervention by the program that have executed 80% of the physical and budgetary target of the multiyear road investment program/total number of local governments targeted for intervention by the program). The target will be calculated in similar fashion, over the same sample of local governments.

[10] The baseline will be adjusted, if necessary, after making an inventory of the local governments targeted for intervention by the program, and this inventory will reflect whether the local governments have previously carried out logistics or productive-development projects.

Expected outputs								
Component 1. Infrastructure works	(i) Works to rehabilitate and improve rural roads; and (ii) preparation of final studies							
Output indicators	**Baseline (2015)**	**2016**	**2017**	**2018**	**2019**	**2020**	**Cumulative target**	**Means of verification/comments**
*kilometers of improved local roads in areas for social inclusion	0		40	320	560	180	1,100	Work acceptance certificates/PVD reports
*kilometers of improved local roads connected to logistics corridors	0			352	616	132	1,100	Work acceptance certificates/PVD reports
kilometers of local roads (social inclusion and logistics corridors) with final studies	0	150	1,530	520			2,200	PVD progress reports

Expected outputs								
Component 2. Road maintenance	(i) Road maintenance works							
Output indicators	**Baseline (2015)**	**2016**	**2017**	**2018**	**2019**	**2020**	**Cumulative target**	**Means of verification/comments**
*kilometers of roads improved in previous programs with periodic and routine maintenance[11]	0		900	1,400	2,100	2,350	2,350	Work acceptance certificates/PVD reports
*kilometers of roads improved in previous programs with maintenance by levels of service	0		450	450	450	450	450	Supervision reports/PVD reports
kilometers of roads improved under the program with routine maintenance[12]	0					2,200	2,200	PVD reports

* The total kilometers improved through infrastructure works under Component 1 and the total kilometers improved in previous programs with road maintenance under Component 2 (5,000 kilometers in total) corresponds to the output indicator used to measure the Bank's contribution to the regional development goals "kilometers of interurban roads built or maintained/improved."

[11] Maintenance of roads improved in previous programs. The total target represents all roads that will undergo this type of maintenance. The annual figures are cumulative values and therefore are not added together.

[12] Maintenance to be performed on the roads targeted for intervention in this program.

Expected outputs								
Component 3. Decentralized road management								
Output indicators	**Baseline (2015)**	**2016**	**2017**	**2018**	**2019**	**2020**	**Cumulative target**	**Means of verification/comments**
Number of local governments executing a decentralized portfolio and that have technical assistance and training	0		25	20			45	Semiannual progress reports
Number of local governments trained in the road management life cycle	0		30	50	63		143	
Road plans updated with a new methodology	0		25	50	70	43	188	
Number of professionals at PVD trained in aspects of public management and project management	0		50	75	75		200	
Number of proposed laws or regulations for institutional adaptation and use of management instruments	0						225	
Number of certified microenterprises	0		50	100			150	
Number of provinces targeted for intervention through the local and logistics development windows	0		24				24	
Local economic development plans (PDELs) prepared[13]	0			6	12	6	24	
Number of project profiles prioritized and prepared in the PDEL	0			12	24	12	48	
Number of policy proposals prepared at the local government level	0			20	45	31	96	

[13] PDELs are one of the specific outputs obtained when a province is targeted for intervention in the VDL program.

FIDUCIARY AGREEMENTS AND REQUIREMENTS

Country: Republic of Peru

Project number: PE-L1135

Project name: Subnational Transportation Support Program

Fiduciary team: Fernando Glasman and Ariel Rodríguez

I. EXECUTIVE SUMMARY

1.1 The country's financial administration systems are adequate and reliable. As for the country procurement system, no country procurement method is currently being used in loan operations financed by international financial institutions. However, document GN-2538-11 (Report for Acceptance of Partial Use of Country Procurement Systems) approved the use of the reverse auction and electronic catalogues for framework agreements subsystems of Peru's public procurement system. Their use will be incorporated into the program's procurement plan upon completion of the implementation phase of the aforementioned subsystems.

II. FIDUCIARY CONTEXT OF THE EXECUTING AGENCY AND THE EXECUTION UNIT

2.1 The executing agency will be the Ministry of Transportation and Communications (MTC). The Decentralized Rural Transportation Program will be managed by the MTC, acting through Provías Descentralizado (PVD) as the program execution unit. The program will be financed by the external resources financed by the IDB and the International Bank for Reconstruction and Development (IBRD), and by the local counterpart resources provided by the national government, acting through PVD, as appropriate. PVD will maintain the program's general direction and will coordinate relations with local governments and processes for procurement and execution of studies, works, and supervision of the rural infrastructure component. As the executing agency, PVD will be responsible for general coordination, technical assistance, fiduciary management, monitoring, tracking, documentation, and evaluation of the program. PVD is responsible for the program's progress and for fulfillment of its objectives and targets.

2.2 The fiduciary evaluation was based on a risk analysis performed with the participation of the MTC, PVD, and the Bank; meetings with key personnel from these entities and with the program team; and prior experience with the executing agency on operations 901/OC-PE, 1328/OC-PE, and 1810/OC-PE.

III. Evaluation of Fiduciary Risks and Mitigation Actions

3.1 The risk evaluation conducted during the program design phase found a medium level of risk for both financial management and procurement.

IV. Considerations for the Special Conditions of the Loan Contract

4.1 **Conditions precedent to the first disbursement.** The executing agency will deliver, to the Bank's satisfaction, evidence that the Program Operating Manual has been approved by the Bank.

4.2 Audited annual and final financial statements, with specific terms of reference acceptable to the Bank, and delivered within 120 days after the end of each fiscal year of the executing agency during the original disbursement period or any extensions. The final audit report will be delivered within 120 days after the end of the original disbursement period or any extensions.

4.3 To determine the equivalency in U.S. dollars of an expense made in the borrower's local currency, the same exchange rate used to convert proceeds disbursed in U.S. dollars to the borrower's local currency will be used. Also, for the purpose of reimbursing expenses from the loan and recognizing expenses against the local counterpart contribution, the exchange rate as of the date on which the request is submitted to the Bank will be used.

V. Fiduciary Agreements and Requirements for Procurement Execution

5.1 The fiduciary agreements and requirements govern the execution of all procurement activity for the program.

5.2 **Procurement execution.** The necessary procurements will be conducted in accordance with the Policies for the Procurement of Goods and Works Financed by the Inter-American Development Bank, March 2011 (document GN-2349-9) and the Policies for the Selection and Contracting of Consultants Financed by the Inter-American Development Bank (document GN-2350-9). An agreement was reached with the executing agency that any procurement processes conducted by local governments will be financed with local counterpart resources and will be subject to national procurement laws and regulations.

5.3 **Procurement of works, goods, and nonconsulting services.** Contracts for works, goods, and nonconsulting services[1] under the program and subject to international competitive bidding (ICB) will be procured using the Bank's standard bidding documents. Bidding processes subject to national competitive bidding (NCB) will be conducted using national bidding documents agreed upon with the Bank (or satisfactory to the Bank if not yet agreed upon). The program sector specialist will be responsible for reviewing the technical specifications for procurement during preparation of the procurement processes.

[1] In accordance with the Bank's procurement policies, nonconsulting services are treated as goods.

5.4 **Selection and contracting of consultants.** Contracts for consulting services will be procured using the standard request for proposals (RFP) issued by, or agreed upon with, the Bank regardless of the amount of the contract (or satisfactory to the Bank if not yet agreed upon). The sector specialist will be responsible for reviewing the terms of reference for the contracting of consulting services.

5.5 **Selection of individual consultants.** Selection of individual consultants will take into account their qualifications to perform the work, on the basis of a comparison of the qualifications of at least three candidates. When warranted by the circumstances, advertisements may be placed in the local or international press.

5.6 The threshold amount for the use of international competitive bidding will be made available to the borrower, through the executing agency, on www.iadb.org/procurement. Below this threshold, the selection method will be determined in accordance with the complexity and characteristics of the procurement process, which must be reflected in the procurement plan approved by the Bank.

5.7 **Prior review of procurement processes.** The Bank will review procurement processes in accordance with the procurement plan. At any time during program execution, the Bank may change the method of such reviews by providing prior notice to the borrower or the executing agency. Any changes approved by the Bank will be reflected in the procurement plan.

5.8 **Domestic preference.** Not applicable.

5.9 **Use of country procurement system.** The Board of Executive Directors has approved the use of subsystems for auction procedures and framework agreements in Peru, and these subsystems will be used after the corresponding implementation agreement and the conditions described therein are signed and the procurement plan is modified accordingly.

5.10 **Initial procurement plan.** See the itemized procurement plan for the first 18 months.

5.11 The borrower will post the procurement plan on the Procurement Plan Execution System (SEPA) and will update it at least every six months or as requested by the Bank in order to reflect the actual needs and progress of the program.

5.12 **Procurement supervision.** The Bank's ex post reviews will cover a sample of contracts on the basis of technical and professional criteria and will be performed by external auditors. Once the country procurement system is implemented, the system may be updated in view of the fiduciary risks.[2]

5.13 **Records and files.** Program files will be kept in the offices of the execution unit under conditions that ensure the integrity and security of documentation.

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[2] Once the reverse auction and framework agreement systems have been put into use in the operations, as part of the strategy of using country systems, procurement processes will be systematically monitored and supevised through monitoring and verification of the stability of Peru's country system.

VI. AGREEMENTS AND REQUIREMENTS FOR FINANCIAL EXECUTION

6.1 **Programming and budgeting.** The annual programming and budgeting will be based on the provisions of the General Office for Public Budgeting of the Ministry of Economy and Finance (MEF). The General Office for Investment Policy, in coordination with the General Office for Planning, Investment, and Budgeting, will prepare the program's annual budget in accordance with the disbursement schedule and will define and agree upon priorities for external financing under the program in question. The budget will be operated using the Integrated Financial Management System (SIAF). The budget allocated to the program will be approved by the MEF and the Peruvian Congress and will be reported annually to the Bank, and the commitments made under the program will be carried out. The executing agency and execution unit will have budgetary autonomy. A multiyear program execution plan will be prepared and will serve as the basis for preparing the annual budget.

6.2 **Accounting and information systems.** The program will use the project execution module that is integrated into the SIAF for program accounting and reports. This module provides transparency and specific controls for budget execution. It also helps to track program accounting and issue financial reports, including disbursement requests, exchange rate monitoring, program financial statements, and other documentation as required by the Bank. Accounting will be on a cash basis in accordance with international accounting standards and the directives of the National Office of Public Accounting.

6.3 Audited annual financial statements will be required for program supervision, and these statements will include: (i) a cash flow statement, (ii) a statement of cumulative investments and the corresponding notes to the financial statements; (iii) the statement by program management (executing agency/execution unit); and (iv) an evaluation of the internal control system.

6.4 **Disbursements and cash flow.** The program will use the country treasury system in accordance with the directives from the National Office of Debt and Treasury. Expenditures are subject to the budgetary and financial execution process, and the information related to the processing of expenditures within the framework of laws and regulations governing each phase—commitment, liquidation, authorization, and payment—must be recorded in the SIAF, in its project execution module. Because the country treasury system does not have a full-fledged single account system, a specific bank account will be opened to manage the loan proceeds.

6.5 Disbursements will be made in accordance with the program's actual liquidity needs (financial planning). The execution unit will submit the disbursement request to the Bank, along with a disbursement schedule for the activities in the annual work plan for the next 180 days. The disbursements will be justified in the next request, up to at least the 80% mark, using the Bank's forms. The execution unit will submit to the Bank, in accordance with Bank policies, the program financial plan reflecting the disbursement schedule for the entire program.

6.6 The external auditors will conduct ex post reviews of the records and supporting documentation for completed activities and transactions. All documents and records must be kept for at least three years from the date of the last

disbursement. Any expenses not eligible for the Bank will be repaid from the local counterpart or other resources, depending on the nature of the ineligibility.

6.7 The exchange rate will be monetized, that is, the exchange rate on the day on which U.S. dollars are converted to Peruvian new soles will apply.

6.8 **Internal control and internal auditing.** The control environment, control activities, communication and reporting, and monitoring of activities of the executing agency and execution unit are governed by country laws and regulations, which are based on the Law on the National Control System and the Office of the Comptroller General.

6.9 The MTC's internal control and audit function is carried out by the Institutional Control Unit (OCI). OCI staff report to the Office of the Comptroller General (CGR). The OCI's scope of action does not usually extend to projects, but the OCI will receive copies of external audit reports through the Government Audit System, which was designed by the CGR and can be used to carry out inspection actions, time and resources allowing.

6.10 The execution unit will include the main internal control processes in the Program Operating Manual to ensure that the controls are functioning effectively.

6.11 **External control and reports.** The CGR, in its role as the lead entity of the National Control System, outsources the external auditing of projects to independent auditing firms considered eligible by the Bank. The Bank-eligible independent auditing firms are periodically evaluated by the Bank to ensure that they are of high quality. The CGR authorizes the executing agency/execution unit to select and hire an independent auditing firm in accordance with Bank policies and for the duration of the program execution period, including any extensions of the disbursement period.

6.12 In view of the program's complexity, due to the number of tasks required for the various components and owing to the need for a high degree of administrative and technical coordination, a level I or II independent auditing firm will need to be selected.

6.13 The cost of the external audits will be covered by the loan proceeds and is estimated at US$350,000 for the expected five-year execution period.

6.14 **Financial supervision plan.** Financial supervision may be adjusted in accordance with the programming of disbursements and the external audit reports.

Table 1. Supervision plan

Supervision activity	Nature and scope	Frequency	Responsible party	
			Bank	Third party
Operational	Visit for inspection/review of program progress	Annual	Fiduciary and technical team	-
	Review of portfolio with executing agency and MEF	Semiannual	Fiduciary and technical team	MEF
Financial	Ex post review of disbursements	2-3 times per year		External auditor
	Financial audit	Annual	Fiduciary team	External auditor
	Review of disbursement requests and attached reports	2-3 times per year	Fiduciary team	-
	Visit for inspection/analysis of internal controls and control environment at executing agency	Annual	Fiduciary team	-
Compliance	Annual allocation of budget resources for program execution	Annual	Fiduciary team	Executing agency
	Delivery of financial statements	Annual	Fiduciary and technical team	External auditor/ executing agency
	Conditions precedent to first disbursement	Once	Fiduciary and technical team	Executing agency