Document of
The World Bank

Report No.: PAD1337

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED LOAN

IN THE AMOUNT OF US$50 MILLION

TO THE

REPUBLIC OF PERU

FOR A

SUPPORT TO THE SUBNATIONAL TRANSPORT PROGRAM PROJECT

November 13, 2015

Transport and ICT Global Practice
Latin America and Caribbean Region

CURRENCY EQUIVALENTS
(Exchange Rate Effective November 2, 2015)

Currency Unit	=	Peruvian Nuevo Sol
PEN 3.28	=	US$1
US$ 0.30	=	PEN 1

FISCAL YEAR
January 1 – December 31

ABBREVIATIONS AND ACRONYMS

CGR	*Contraloria General de la Republica* (Comptroller General's Office)
CPS	Country Partnership Strategy
CREMA	*Contrato de Recuperacion y Mantenimiento* (Performance Based Road Rehabilitation and Maintenance Contract)
DC	Direct Contracting
DGASA	*Dirección General de Aspectos Sociales y Ambientales* (General Directorate for Environmental and Social Matters)
ESMF	Environmental and Social Management Framework
FONIE	*Fondo para la Inclusión Económica* (Fund for Economic Inclusion)
FM	Financial Management
GoP	Government of Peru
IADB	Inter-American Development Bank
ICB	International Competitive Bidding
INEI	*Instituto Nacional de Estadística e Informática* (National Institute of Statistics and Informatics)
IPPF	Indigenous Peoples Planning Framework
IRR	Internal Rate of Return
LDW	Local Development Window
LLDW	Local and Logistics Development Window
MEF	Ministry of Economy and Finance
MTC	*Ministerio de Transporte y Comunicaciones* (Ministry of Transport and Communications)
NCB	National Competitive Bidding
NPV	Net Present Value
OM	Operational Manual
PATS	*Programa de Apoyo al Transporte Sub-nacional* (Support to the Subnational Transport Program)
PCG	Program Coordination Group
PG	Provincial Government
PRI	Provincial Roads Institute
PTRD	*Programa Transporte Rural Descentralizado* (Decentralized Rural Transport Project)
PVD	*Provias Descentralizado* (Rural Roads Agency)

RAI	Rural Access Index
RAP	Resettlement Action Plan
RG	Regional Government
SIAF	*Sistema Integrado de Administración Financiera* (Integrated System of Financial Management)
SOE	Statement of Expenditure
TOR	Terms of Reference

Regional Vice President:	Jorge Familiar
Country Director:	Alberto Rodriguez
Senior Global Practice Director:	Pierre Guislain
Practice Manager:	Aurelio Menendez
Task Team Leader:	Anca Cristina Dumitrescu

REPUBLIC OF PERU
Support to the Subnational Transport Program Project

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Support to the Subnational Transport Program Project (P132515)

PROJECT APPRAISAL DOCUMENT

LATIN AMERICA AND CARIBBEAN

Transport and ICT Global Practice

Report No.: PAD1337

Basic Information			
Project ID P132515	EA Category B - Partial Assessment		Team Leader(s) Anca Cristina Dumitrescu
Lending Instrument Investment Project Financing	Fragile and/or Capacity Constraints [ ] Financial Intermediaries [ ] Series of Projects [ ]		
Project Implementation Start Date 09-Dec-2015	Project Implementation End Date 31-Mar-2021		
Expected Effectiveness Date 09-March-2016	Expected Closing Date 31-Mar-2021		
Joint IFC No			
Practice Manager/Manager Aurelio Menendez	Senior Global Practice Director Pierre Guislain	Country Director Alberto Rodriguez	Regional Vice President Jorge Familiar
Borrower: Republic of Peru			
Responsible Agency: *Provias Decentralizado*			
Contact: Alexei Oblitas Chacon		Title: Director	
Telephone No.: +51 1 514 5300		Email: aoblitas@proviasdes.gob.pe	

Project Financing Data(in US$, millions)					
[X] Loan	[ ] IDA Grant	[ ] Guarantee			
[ ] Credit	[ ] Grant	[ ] Other			
Total Project Cost:	600.00		Total Bank Financing:	50.00	
Financing Gap:	0.00				

Financing Source	Amount
Borrower	500.00
International Bank for Reconstruction and Development	50.00
Inter-American Development Bank	50.00
Total	600.00

Expected Disbursements (in US$, millions)

Fiscal Year	2016	2017	2018	2019	2020	2021
Annual	2.00	9.00	18.00	14.00	4.00	3.00
Cumulative	2.00	11.00	29.00	43.00	47.00	50.00

Institutional Data

Practice Area (Lead)

Transport & ICT

Cross Cutting Topics

[ ] Climate Change
[ ] Fragile, Conflict & Violence
[X] Gender
[X] Jobs
[ ] Public Private Partnership

Sectors / Climate Change

Sector (Maximum 5 and total % must equal 100)

Major Sector	Sector	%	Adaptation Co-benefits %	Mitigation Co-benefits %
Transportation	Rural and Inter-Urban Roads and Highways	50		
Transportation	General transportation sector	30		
Public Administration, Law, and Justice	General public administration sector	20		
Total		100		

☑ I certify that there is no Adaptation and Mitigation Climate Change Co-benefits information applicable to this project.

Themes

Theme (Maximum 5 and total % must equal 100)

Major theme	Theme	%
Public sector governance	Decentralization	40

Rural development	Rural services and infrastructure	40
Trade and integration	Trade facilitation and market access	20
Total		100

Proposed Development Objective(s)

The Project development objectives are to (a) facilitate sustainable road access of Peru's rural populations to services, (b) reduce transport costs on rural roads linked to priority logistics corridors, and (c) strengthen decentralized road management.

Components

Component Name	**Cost (US$, millions)**
Infrastructure for Integration and Social Inclusion	35.00
Rural Road Infrastructure Maintenance	10.00
Decentralized Road Management	4.65
Project Management	0.35

Systematic Operations Risk-Rating Tool (SORT)

Risk Category	**Rating**
1. Political and Governance	Substantial
2. Macroeconomic	Moderate
3. Sector Strategies and Policies	Moderate
4. Technical Design of Project or Program	Substantial
5. Institutional Capacity for Implementation and Sustainability	Substantial
6. Fiduciary	Moderate
7. Environment and Social	Moderate
8. Stakeholders	Moderate
OVERALL	Substantial

Compliance

Policy

Does the Project depart from the CAS in content or in other significant respects?	Yes [ ] No [X]
Does the Project require any waivers of Bank policies?	Yes [ ] No [X]
Have these been approved by Bank management?	Yes [ ] No [ ]
Is approval for any policy waiver sought from the Board?	Yes [ ] No [X]
Does the Project meet the Regional criteria for readiness for implementation?	Yes [X] No [ ]

Safeguard Policies Triggered by the Project	**Yes**	**No**
Environmental Assessment OP/BP 4.01	**X**	

Natural Habitats OP/BP 4.04	**X**	
Forests OP/BP 4.36	**X**	
Pest Management OP 4.09		**X**
Physical Cultural Resources OP/BP 4.11	**X**	
Indigenous Peoples OP/BP 4.10	**X**	
Involuntary Resettlement OP/BP 4.12	**X**	
Safety of Dams OP/BP 4.37		**X**
Projects on International Waterways OP/BP 7.50		**X**
Projects in Disputed Areas OP/BP 7.60		**X**

Legal Covenants

Name	**Recurrent**	**Due Date**	**Frequency**
Establishment of Program Steering Working Group		01-Mar-2016	

Description of Covenant

The borrower shall establish, and thereafter maintain during the implementation of the Project, a Steering Working Group chaired by the executive director of *Provias Descentralizado* (Rural Roads Agency [PVD]).

Name	**Recurrent**	**Due Date**	**Frequency**
Signing of Framework Agreement	**X**		Throughout implementation

Description of Covenant

The borrower, through PVD, prior to the provision of support to any participating province under the Project, enters into an agreement ("Framework Agreement"), with each participating province, acceptable to the Bank as further specified in the Operational Manual, setting forth the terms and conditions of the cooperation between PVD and the province with respect to Project implementation.

Name	**Recurrent**	**Due Date**	**Frequency**
Submission of the Annual Operating Plan	**X**		Yearly

Description of Covenant

The borrower, through PVD, not later than 60 days after the end of each calendar year, shall prepare and furnish to the Bank a plan, acceptable to the Bank (Annual Operating Plan), covering activities planned for the next twelve months of Project implementation.

Name	**Recurrent**	**Due Date**	**Frequency**
Establishment of the Socio-Environmental Unit		01-Sep-2016	

Description of Covenant

The borrower, through PVD, not later than six months after the Effectiveness Date shall create and thereafter maintain until the completion of the Project, a socio-environmental unit within PVD,

responsible for the adequate preparation, implementation and supervision of safeguards documents required under the Project, with a structure and key staff acceptable to the Bank.

Conditions

Source Of Fund	Name	Type
IBRD	Loan Effectiveness	Effectiveness

Description of Condition

The Operational Manual has been adopted by PVD.

Source Of Fund	Name	Type
IBRD	Loan Effectiveness	Effectiveness

Description of Condition

The Program Coordination Group has been created and staffed in a manner satisfactory to the Bank.

Team Composition

Bank Staff

Name	Role	Title	Specialization	Unit
Anca Cristina Dumitrescu	Team Leader (ADM Responsible)	Senior Operations Officer	Transport	OPSPQ
Selene del Rocio La Vera	Procurement Specialist	Procurement Specialist	Procurement	GGODR
Nelly Ikeda	Financial Management Specialist	Financial Management Specialist	Financial Management	GGODR
Alonso Zarzar Casis	Safeguards Specialist	Sr Social Scientist	Social Development	GSURR
Aracelly G. Woodall	Team Member	Senior Program Assistant	Operations	GTIDR
Maria Virginia Hormazabal	Team Member	Finance Officer	Disbursements	WFALN
Mariana Margarita Montiel	Counsel	Senior Counsel	Legal	LEGLE
Raul Tolmos	Safeguards Specialist	Environmental Specialist	Environment	GENDR
Satoshi Ogita	Team Member	Transport Specialist	Transport	GTIDR
Sergio Garcia Monroy	Team Member	Temporary	Transport	GTI04
Steven Farji Weiss	Team Member	E T Consultant	Poverty/Soc. Dev.	GTIDR

Extended Team

Name	Title	Office Phone	Location

Oswaldo Patino	Consultant	+51 993 495 924	Lima

.

Locations

Country	First Administrative Division	Location	Planned	Actual	Comments
	Provias Decentralizado	**Lima**	**X**		2,200 km of rural roads rehabilitated throughout Peru; and 2,800 of rural roads maintained throughout Peru – selected in accordance with criteria on social inclusion and links to logistics corridors
Peru					

Consultants (Will be disclosed in the Monthly Operational Summary)

Consultants Required? Consultants will be required.

I. STRATEGIC CONTEXT

A. Country Context

1. **In the past decade, Peru has displayed strong economic performance, reaching high growth rates, low inflation, macroeconomic stability, and reduction of external debt.** During the financial crisis of 2009, Peru's economy registered a modest growth, followed by a speedy recovery at an average rate of 6.5 percent during 2010–2014. Economic growth has been accompanied by sustained decrease in the poverty rate. Between 2005 and 2014, the poverty headcount fell from 55.6 percent to 22.7 percent while extreme poverty was reduced from 15.8 percent to 4.3 percent. Similarly, the record in shared prosperity has been very positive, with income growth of the bottom 40 percent averaging 6.6 percent per year against 3.7 percent for the overall population during 2008–2013. Notwithstanding this good performance, disparities across the country remain high, particularly between rural and urban areas. In 2014, while the poverty rate was only 15.3 percent in urban areas, it stood at 46 percent in rural areas.

2. **In 2011, the Government of Peru (GoP) launched an ambitious agenda to overcome social inequalities and boost productivity while maintaining high economic growth rates under a solid macroeconomic framework**. Under this agenda, the main objectives of the government are to improve access to services, increase employment, raise coverage of the social safety net, significantly reduce extreme poverty, better monitor environmental impacts, and enhance connectivity with the rural areas of Peru. In addition, the country has been engaged in a decentralization process that will allow regional and local governments to assume additional responsibilities for regulation, public expenditure management, and service delivery.

B. Sectoral and Institutional Context

3. **The dispersion of population in Peru—due to its geographic conditions—has always been a significant cause for persistent rural poverty, hampering access to markets and public services.** In his recent research on Connectivity and Rural Development, Richard Webb[1] demonstrates that "the central engine of rural development in Peru has been improved connectivity, which includes the roads—some built by the communities—and other infrastructure for the transportation of goods and people."

4. **Despite the remarkable economic growth over the last decade, Peru still faces important gaps in the quantity and quality of its infrastructure, which constitutes a bottleneck to its competitiveness and shared prosperity goals**. In particular, the low availability and poor quality of its road network is constraining mobility and increasing logistics costs and remains a major obstacle to growth and poverty reduction in many poor areas of rural Peru. To address these issues, the Strategic Sector Plan 2012–2016 of the *Ministerio de Transporte y Comunicaciones* (Ministry of Transport and Communications [MTC]) for the road sector is focused on the establishment of logistics platforms and corridors that facilitate trade and help address the local and international markets' demands. In this plan, the MTC has prioritized 22 logistics corridors through which the most relevant commercial and local products are being

[1] *"Conexion y despegue rural", Primera edicion*, Lima 2013. Richard Webb is a well-known and respected Peruvian economist and former president of Central Bank of Peru.

mobilized. The identified logistic corridors comprise national, secondary, and rural roads over a total length of 25,700 km. Reducing transport and logistics costs on the tertiary roads linking the production areas to the distribution centers along corridor networks has become a priority. The logistic costs in Peru are estimated to represent 29 percent to 34 percent of the retail price while the average in Latin America is 24 percent and only 9 percent in the Organization for Economic Co-operation and Development countries. Recent analytical work carried out by the Bank shows that poor transport infrastructure and services are the main cause for product losses on tertiary roads and transport cost may account for up to 75 percent of the total logistics cost, based on information on selected key export corridors for agricultural products.[2]

5. **Although improving competitiveness through better logistics is the main driver of the MTC's Strategic Plan, promoting social inclusion remains a key objective for the GoP**. Given the geographical challenges of the country, the programs that support rural roads therefore are expected to support the goals of improved connectivity, local market development, increased trade and transport and access to services, and, ultimately, productive inclusion of the poor.

6. **In line with the GoP's priorities, the purpose of the *Programa de Apoyo al Transporte Sub-nacional* (Support to the Subnational Transport Program Project [PATS]) is twofold**: (a) to support investments in rural roads that link the poorest and most remote districts of the country and (b) to support physical, institutional, and regulatory investments to improve road transport infrastructure and services in selected tertiary roads feeding logistics corridors prioritized by the MTC. PATS will be implemented at the levels of the local/provincial governments (PGs) that have jurisdiction over the secondary and tertiary (rural) road networks, aiming at further strengthening the decentralization process started more than a decade ago in Peru while maintaining close coordination with the central government.

7. **Research has shown that poor access to services is a defining characteristic of poverty.** According to the International Labor Organization, lack of access has its impact at the most basic level of living: if there is poor access to health services, people will remain unhealthy; if there is poor access to basic information the household will be unaware of ideas and technology that might help them to lift their level of living. Taking this into account, investing in infrastructure, particularly in poor rural areas, can hence help improve the well-being of rural households by providing easier access to basic services and income-generating activities. There is increasing evidence that rural roads projects can have significant impacts on household welfare, asset ownership, agricultural productivity, and access to basic services. In the case of Peru, a survey[3] in 176 rural districts in the poorest and previously isolated areas in the Andean provinces revealed two major changes over the years, which are explained by the improvement of rural accessibility. First, between 2001 and 2011, the daily rate for farm workers rose by an average of 73 percent in real terms, the price of a hectare of agricultural land by 88 percent, and that of a house in a local town by 166 percent. Second, over the same period, travel time to the nearest city dropped from almost nine hours to just under four and a half hours. This had a large effect on the number of

[2] World Bank Study on "Integral Analysis of Logistics Services in Peru" (April 2015).

[3] As part of the Impact Evaluation studies performed in 2000, 2004, 2006, and 2011 to assess the impact of the Bank-financed roral road projects in Peru. See also Footnote 4.

health consultations, increasing them by 70 percent (see annex 5 for an analysis of mobility and accessibility).

8. **Rural road network**. Peru's has a road network of about 150,000 km, of which more than 95,000 km form the rural network. Typically, these are low volume roads, but they do not benefit from a well-expanded maintenance culture. This, added to the country's geography and climate which makes it prone to natural disasters—in particular in the Amazonian and Andean high regions—leads to poor accessibility. Further, despite the various roads programs of the past years for rehabilitation and maintenance, nearly 45 percent of the rural network remains in bad or very bad condition, which virtually isolates some areas for uncertain periods. The causes of these relatively bad statistics is a combination of geography and climate challenges affecting Peru, with almost unavoidable damages caused by land slides and flooding, leading to surface rutting, ditches, bumps on the road, and so on., which in turn lead to transit cuts. To address these issues, in the past two decades, through earlier programs supported by the Bank, around 28 percent of the rural roads network was improved and/or rehabilitated. The government, through the MTC and *Provias Descentralizado* (Rural Roads Agency [PVD])—a 'special project' created to be in charge of preparation, management, and implementation of rural transport infrastructure through various programs, in a decentralized environment—also supports the development of a maintenance culture by allocating funds for routine maintenance (see paragraph 34 on sustainability).

9. **The Project will build on the experiences from a series of rural roads programs supported by the Bank over the past two decades[4] and will help consolidate and expand the decentralized road management agenda.** This will be done by further strengthening the capacity of the local government authorities across the three jurisdictional levels (regional, provincial, and district), particularly with regard to accountability related to the regulation of transport infrastructure and services. The Bank started its collaboration with the Peruvian authorities, on rural roads, in 1995 and each of the four Bank-financed projects were designed and co-financed with the Inter-American Development Bank (IADB). They focused on reducing rural poverty and integrating remote zones through the rehabilitation of rural transport network while (a) initiating a culture of routine maintenance through microentreprises formed from the surrounding communities, which continued in the subsequent operations; (b) promoting increased decentralization in the execution of works through the creation of provincial road institutes (PRIs); and (c) creating the concept of 'Local Development Windows' (LDWs)[5].

10. **Cross-cutting themes.** The Project will introduce innovative features such as emphasizing the development of key measures needed to promote more efficient road transport infrastructure and logistic services and supporting the integration of subnational governments' investment planning and budgeting into the new GoP policy of 'budgeting for results'.[6] It will also support

[4] PE-Rural Roads Rehabilitation and Maintenance - P037047 (1995–2001); PE-Second Rural Roads Project - P044601 (2001–2006); PE-Peru Decentralized Rural Transport Project - P095570 [PTRD]) (2007–2013); and PE-Regional Transport Infrastructure Decentralization -- P078813 (2006–2014).

[5] An instrument to complement the investments in road improvements with economic generation opportunities along these roads. The LDW consisted of economic production projects such as agricultural products or ecotourism business plans as part of local development strategies and plans.

[6] Budgeting for results is a new approach to developing the public budget by the Ministry of Economy and Finance (MEF), in which the investments to be financed with public funds are designed, implemented, and evaluated to promote pro-poor changes, particularly in relation to the poorest in the country. Rural access indicators are among those targeted under the responsibility of the MTC.

the strategic objectives of the PVD/MTC of introducing three cross-cutting themes in the management of rural roads infrastructure and services in the context of regional economic development: (a) road safety; (b) socio-environmental compliance at the local level; and (c) promotion of gender equality.

11. **Road safety.** At the national level, the country faces issues related to noncompliance with traffic regulations as well as poor signaling systems, resulting in a high rate of road accidents. More specifically, Peru had more than 100,000 traffic accidents in 2013, with more than 3,100 deceases. The fatality rate is 13.9 per 100,000 people, lower than the average of 19.5[7] in Latin America; Chile is the best performing country in the region (at a rate of 12.4). Beyond the human tragedy, related economic losses are estimated at 2 percent of the gross domestic product. Among road traffic victims, vulnerable population groups tend to be particularly affected by this type of idiosyncratic shock. Not only are the poor and bottom 40 percent disproportionately overrepresented among the victims, but road-related accidents result in untold misery for low-income groups who may be deprived of the sole income-generating source following a fatality or an accident. Furthermore, between 2012 and 2013, Peru's rate for accidents in rural areas rose by 20 percent, the highest growth in the Andean communities—despite accounting for only 2.5 percent of the total number of accidents within the country.

12. **Socio-environmental compliance**. More attention—other than compliance with the Project safeguards requirements of the co-financing international institutions—needs to be given to the sustainable promotion, application, and implementation supervision of national legislation on environmental and social protection in rural roads projects. The PVD needs to strengthen its own capacity and develop a capacity-building and supervision plan for environmental and social management by the local governments so that the latter can comply with the national regulations during the decentralized execution of roads works.

13. **Promotion of gender in the rural road sector.** Former Bank-financed rural roads projects in Peru have consistently promoted participation of women in social and economic opportunities created by the operations; a notorious example is women's participation in microenterprises for routine maintenance where their number increased to 28 percent of the members.[8] The PTRD created jobs for 429 women and trained 4,330 women during the 6 years of the project. Nevertheless, there is more to be done and in a more consistent manner with respect to both enabling factors for and eliminating barriers to women's participation in the roads sector, especially in poor rural areas.

14. **Advancing with decentralization agenda**. Despite past efforts, most of the GoP programs for rural roads improvement—except for routine maintenance—are executed by the PVD in a centralized manner due to the limited capacity of local governments to plan, prioritize, and manage the funds allocated for that purpose. The GoP is committed to advance with the establishment of a sustainable decentralized system where the local governments have full capacity to manage their road networks. That can be done by strengthening of decentralized management

[7] World Health Organization 2011. http://www.worldlifeexpectancy.com/cause-of-death/road-traffic-accidents/by-country/.

[8] ICR Report No: ICR00003098 (2014); see also "Effects of Enhancing Women's Participation in Rural Roads Projects on Women's Agency: A Comparative Assessment of Rural Transport Projects in Argentina, Nicaragua, and Peru" (World Bank 2014).

of the secondary and tertiary roads by the regional governments and PGs, respectively, while the PVD is to shift its focus on supervision and monitoring of results.

C. Higher Level Objectives to which the Project Contributes

15. **Linkage with Country Partnership Strategy**. The Project is directly related to the World Bank Group Country Partnership Strategy (CPS) for FY2012–FY2016 discussed by the World Bank Board of Executive Directors on February 1, 2012. The CPS focuses on supporting the government in improving equity through social services, infrastructure, and competitiveness while continuing to preserve macro stability. Peru needs more and better public infrastructure and social services, particularly for those living in poverty, and PATS is fully aligned with Pillar II of the CPS: Connecting the Poor to Services and Markets.

16. **The Project is closely aligned with the Bank's goals of reducing poverty and promoting shared prosperity.** Road rehabilitation works will take place in 23 departments targeting the districts with the highest poverty and vulnerability levels in the country. In this respect, almost 5 million inhabitants—most of whom belong to the lower two quintiles of the income distribution—will benefit from PATS. Furthermore, the social inclusion component, which seeks to improve social infrastructure exclusively in rural areas identified by the *Fondo para la Inclusion Económica* (Presidential Fund for Economic Inclusion [FONIE]), will directly improve social access conditions in 65 districts, thereby benefiting close to 500,000 rural dwellers. More specifically, the envisaged works will lead to important social and economic outcomes in terms of (a) direct and indirect job creation and other income-generating opportunities; (b) improvement of agricultural incomes and productivity through reduced travel times to markets; (c) better access to health and education facilities in the under-served rural areas, particularly in the highlands where some villages are almost disconnected from basic public services; and (d) in the medium to long term, increased productive investments in beneficiary communities and employment opportunities for residents, which, in turn, will improve household consumption and decrease poverty rates. See annex 5 for details on the Project's alignment to the Bank's twin goals.

17. **Value added by the Bank participation**. The Bank has an extensive history of working with Peru on rural roads, which continues to be an important part of the GoP agenda for reducing poverty and inequality along with supporting the decentralization process. However, the work is not yet complete. The Bank contribution to PATS will focus on improving the mechanisms of transparency and accountability at the local level, as well as on the efficiency of rehabilitation and maintenance spending. The Bank will also support the sustainability of the interventions in the road sector through improved engagement of the local communities in maintenance activities (for example, promotion of microenterprises and graduation of some microenterprises to small local companies that are able to compete for maintenance works). Furthermore, the Bank plays a catalyst role in promoting synergy with other programs: PATS is seen as an opportunity to boost the quality and quantity of spending under FONIE, which includes improvement of rural roads, along with provision of other basic infrastructure services, in the country's 570 districts of extreme poverty—some in the Project area. PATS uses FONIE's mechanisms and criteria for investment selection and prioritization focused on the poorest and most vulnerable areas in the country. Finally, the Bank will support the MTC strategic plan which provides for a holistic approach to transport in support of the development of economic and logistics corridors—including the rural roads networks that feed them—as a means to prioritize public investment focused on the country's

competitiveness. The Bank has unique and extensive experience in the prioritization and support of logistics corridors development. Global experience has shown that one of the main logistics bottlenecks that affect the agro-logistics portion of road corridors is poor rural access and quality, in particular roads serving farms—the first link in the export supply chain. Any strategy based on development of logistics corridors needs to take this first link into account. The design of the subcomponent on Integration of the Feeder Network into Selected Logistic Corridors is based on the Study on Integral Analysis of Logistics Services in Peru April 2015 carried out by the Bank at the request of the Ministry of Foreign Trade and Tourism.

II. PROJECT DEVELOPMENT OBJECTIVES

A. PDO

18. The Project development objectives are to (a) facilitate sustainable road access of Peru's rural populations to services, (b) reduce transport costs on rural roads linked to priority logistics corridors, and (c) strengthen decentralized road management.

Project Beneficiaries

19. PATS will support the competitiveness and social inclusion efforts promoted by the GoP in all the provinces at a national level except for the Lima Metropolitan Region and the Constitutional Province of Callao. As such, it will directly benefit local producers, rural households, and road users in the areas under the scope of the Project. These beneficiaries will experience improved access to Peru's main logistics corridors with reduced travel times, lower costs, better transport services to deliver the products to their final destination, and safer travel. Evidence suggests that the greatest benefits may accrue to the residents of the more remote rural communities who will benefit through increased job opportunities and other income-generating activities as a result of improved connectivity and access to additional productive activities. These impacts will be assessed through an impact evaluation study (see paragraph 34).

20. The main stakeholders directly benefiting from the Project are road users, both passengers and freight travel, because of expeditious and potentially less costly trips. More specifically, the poorest segment of population in remote areas will benefit the most since PATS will target social inclusion through better access to services, markets, and job opportunities. Additionally, women in rural areas will directly benefit from the Project due to their inclusion in the staff of the routine maintenance microenterprises and the implementation of activities that directly benefit women in the extended local and logistics development window (LLDW).

PDO Level Results Indicators

21. **Key indicators** (see annex 1 for Results Framework)

(a) Share of rural population with access to an all-season road (core)
(b) Reduced truck transit time from production to distribution centers on feeder roads integrated to logistics corridors
(c) Vehicle operating cost for trucks
(d) Roads in good and fair condition as a share of total classified roads (core)

22. Impact on employment opportunities for poorer segments of the population will be assessed through measurement of jobs created directly and indirectly by the Project in the road rehabilitation and maintenance activities and improvements in accessibility to jobs, respectively. The impact assessment is to be carried out at the end of PATS implementation (see annex 5 for details).

III. PROJECT DESCRIPTION

A. Project Components

23. The Project objectives will be achieved through four components (see annex 2 for detailed component descriptions).

Component 1: Infrastructure for Integration and Social Inclusion (US$405.8 million, of which Bank financing is US$35 million)

24. Component 1 comprises the following two subcomponents:

- **Subcomponent 1.1: Infrastructure for Social inclusion (US$169.7 million, of which Bank financing is 27.7 million).** This subcomponent will scale up the previous rural roads programs by prioritizing interventions that promote accessibility and social inclusion of the poorest rural areas. Activities include (a) technical design and detailed engineering studies for roads rehabilitation and improvement; (b) execution of civil works for rehabilitation and improvement of about 1,100 km of rural roads, including road safety materials and related road users training; (c) implementation of safeguards mitigation measures as needed; and (d) supervision of related civil works.

- **Subcomponent 1.2: Integration of the Feeder Network into Selected Logistic Corridors (US$236.1 million, of which Bank financing is US$7.3 million).** This subcomponent will support the MTC's competitiveness agenda by improving the transitability of rural roads linked to and/or feeding into five selected logistic corridors: Chiclayo-Moyobamba-Tarapoto-Yurimaguas-Iquitos (Corridor 1); Matarani-Arequipa-Juliaca-Puno-Puente Inambari (Corridor 5); Cusco Puerto Maldonado-Inapari (Corridor 8); Cusco-Juliaca-Puno-Desaguadero (Corridor 11); and Tarapoto-Aucayacu-Tocache-Tingo Maria (Corridor 12). Activities include (a) technical design and detailed engineering studies for roads rehabilitation and improvement; (b) centralized execution of civil works for the rehabilitation of about 1,100 km of rural roads linked to the abovementioned logistics corridors,[9] including road safety materials and related road users training; (c) implementation of safeguards mitigation measures as needed; and (d) supervision of related civil works.

Component 2: Rural Road Infrastructure Maintenance (US$151.9 million, of which Bank financing is US$10 million)

[9] The subcomponent will introduce *Contrato de Recuperacion y Mantenimiento* (Performance Based Road Rehabilitation and Maintenance Contract [CREMA]) contracts.

25. This component will finance activities to support an efficient and sustainable decentralized maintenance of the rural road network. Activities will include: (a) technical design for periodic and routine maintenance contracts; (b) centralized and decentralized execution of civil works for periodic and routine maintenance of about 5,000 km of rural roads. The routine maintenance will be executed by microenterprises; and (c) supervision of related civil works.

Component 3: Decentralized Road Management (US$26.7 million, of which Bank financing is US$4.65 million)

26. This component will finance technical assistance, training, and equipment at both the subnational (regional or provincial government (RG)/PG) and central (PVD) levels to support the consolidation of the decentralized transport management agenda. It will include five main subcomponents: (a) strengthening the capacity of RGs/PGs in road transport management, including on the three cross-cutting themes promoted by the Project: socio-environmental, road safety, and gender; (b) institutional strengthening of the PVD; (c) development and implementation of a capacity-building program for routine maintenance through microenterprises; (d) design and implementation of LLDWs; and (e) program monitoring and evaluation, including implementation of an information and reporting system. Activities (a), (c), and (d) will include incentives on gender participation and promotion.

Component 4: Project Management (US$15.7 million, of which Bank financing is US$0.35 million)

27. This component will cover PATS' incremental administrative costs, including staff, audits, information dissemination, program activities related to training, and operational support through consulting services. The only activity to be financed by the Bank under this component will be the external audit; the cost will be shared with the IADB.

B. Project Financing

28. Given the nature of the proposed interventions (mainly periodic and routine maintenance of subnational roads), there is limited scope for private financing; traffic volumes in the targeted road sections are relatively low even under Subcomponent 1.2. The social inclusion activities are aimed at connecting lagging areas to integrate rural poor to basic public services for which public provision is the preferred alternative.

29. The Bank loan will finance US$50 million (8.3 percent) of the five-year government program totaling US$600 million. The remaining US$550 million is to be co-financed by the IADB (US$50 million) and the GoP's counterpart funds (US$500 million).

Project Cost and Financing

Project Components	Project Cost (US$, millions)	IBRD Financing (US$, millions)	% Financing	IADB Financing (US$, millions)	% Financing	GoP Financing (US$, millions)	% Financing
1. Infrastructure for Integration and Social Inclusion	405.8	35.0	8.6	35.0	8.6	335.8	82.7

1.1 Infrastructure for Social Inclusion	169.7	27.7	16.3	27.7	16.3	114.3	67.3
1.2 Integration of the Feeder Network into Selected Logistic Corridors	236.1	7.3	3.1	7.3	3.1	221.5	93.8
2. Rural Road Infrastructure Maintenance	151.9	10.0	6.6	10.0	6.6	131.9	86.8
3. Decentralized Road Management	26.7	4.65	17.6	4.65	17.6	17.4	65.2
4. Project Management	15.7	0.35	2.2	0.35	2.2	15	95.6
Total Costs							
Total Project Cost	**600**	**50**	**8.3**	**50**	**8.3**	**500**	**83.4**
Front-End Fee	–	–	–	–	–	–	–
Total Financing Required	**600**	**50**	**8.3**	**50**	**8.3**	**500**	**83.4**

Note: Due to rounding off, all figures may not add up exactly.

C. Lessons Learned and Reflected in the Project Design

30. The Project was designed based on the experience gathered from the previous Bank engagements in the sector (see paragraph 9 and footnote 3). The main lessons are summarized below:

(a) **Coordination and collaboration culture.** Coordination between different levels of government and the alignment of interests are instrumental for achieving the Project goals. The PVD has developed a program management model describing the strategic lines and principles (for example, sustainability, decentralized model, cross-cutting themes) pursued by PATS, which is periodically shared and discussed with the MTC and MEF in an effort to align it with their strategies and to seek their confirmation and early guidance.

(b) **Design.** A gradual approach with adequate flexibility for road interventions in diverse and geographically dispersed regions can be useful when new mechanisms or modalities are proposed. There was an inertia in past programs on advancing a genuine decentralized road management model. PATS will further support the consolidation of the decentralized rural roads asset management. Component 4 will support a stakeholder mapping and institutional assessment (improving the decentralized institutional model), to delineate the roles and responsibilities of key actors. The training program on technical aspects—including investment planning, road safety, socio-environmental aspects, and gender—for both staff of the PVD as well as subnational decentralized entities will be better designed and monitored, with specific targets to be achieved.

(c) **Procurement and financial management**

- Previous projects had to deal with lengthy procurement issues that contributed to slow implementation, among which the most common were high number of small procurement packages resulting in hundreds of contracts; high rotation of RG staff who participated in the procurement processes; bidding processes that ended as ‘non-responsive’ due to substantial differences between evaluated bids and the

borrower's estimated cost or available budget; and misinterpretation of Bank's Procurement Guidelines, which allowed the PVD to reject bids because of omissions or mistakes that could be easily clarified by the bidder. PATS will support a reduced number of contracts for civil works, whenever possible (in particular under Subcomponent 1.2), and procurement training will be carried out to strengthen the PVD and local capacity.

- Deficient financial management (FM) turned out to be an important obstacle for quick and efficient implementation in the past projects. This included inadequate administrative control; lack of transparency in funds flow management; and inaccuracy in the flow and allocation of funds. The new approach of 'budget for results' and a clearly designed and detailed scheme for the flows of funds, including improved reporting, supervision, and accountability, will help overcome past deficiencies.

IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

31. **Implementation agency**. At the national level, the overall responsibility for management and coordination will rest on the PVD. The PVD was created in August 2006 after the merger of two previously existing entities: *Provias Rural* and *Provias Departamental*. It is the executing arm of the MTC with technical, administrative, and financial autonomy, in charge of the activities of preparation, management, and implementation of rural transport infrastructure. Overall, the PVD has a long-standing tradition as the implementing agency for decentralized road projects/programs, having completed several operations in partnership with multilateral organizations (the Bank and IADB in recent years) with a satisfactory record. The PVD is familiar with the Bank and IADB procedures. The PVD's technical staff will be in charge of the procurement and supervision contracts for the more complex rehabilitation and improvement works for rural roads under Component 1. The planning, procurement, and management of civil works contracts and related activities under parts of Subcomponent 1.1 and Component 2 will be carried out by the PGs with technical support, as the case may be, from the PRIs under PVD supervision. A Program Coordination Group (PCG) led by a coordinator will be in charge of PATS implementation. The PCG comprises the most experienced staff in the PVD and it reports directly to the Program Steering Working Group under the PVD's executive director. The full organigram of implementation is included in annex 3, figure 1.

32. The PRIs are decentralized technical bodies whose capacity has been supported by the PVD (for example, they include a technical staff member from the PVD, who assists with planning and works design, they receive training through PVD programs, and so on.) and are governed by the Provincial Road Boards; the latter include all the mayors (district and provincial) of each province. The PRIs operating expenditures are covered by contributions from municipalities based on distributions criteria decided by the Provincial Road Board and depending generally on the level of intervention in the respective territories. Currently, most of the PRIs focus on the execution

of routine maintenance through the microenterprises (planning, training, contracting, and supervision) on behalf of the PGs.

B. Results Monitoring and Evaluation

33. The PVD, through its PCG, will be responsible for the PATS monitoring and evaluation. Proposed indicators are straightforward and relatively easy to quantify. The final number of direct beneficiaries, disaggregated by gender, will be captured through the impact evaluation study. The PVD is expected to carry out the monitoring and evaluation in a satisfactory manner, given its past experience with this activity. The Results Monitoring Framework is detailed in annex 1.

34. An impact evaluation study[10] will be carried out at the beginning and end of PATS. This exercise will finance innovative assessments to measure program-induced effects on a number of transportation-related outcomes (traffic counts, vehicle speeds, travel times, road safety, and availability of public transport), which will improve as a result of the intervention. Nevertheless, in line with previous impact analyses carried out in the context of the Decentralized Rural Transport Project, a broad range of outcomes which may be indirectly affected by PATS will require further examination. In this line of reasoning, the task will focus on the short- and long-term distributional impacts of the Project on a number of indicators correlated to household welfare, such as household income and consumption, employment and investment, and access and utilization of health and education services, among others. The assessment may also examine changes occurring outside the household in local and regional markets, such as investment, land use and employment, agricultural productivity and cropping patterns in selected Project localities, and changes in the prices of the most traded commodities. Furthermore, since PATS aims at improving the operation of logistics platforms and corridors that facilitate trade through the rehabilitation and capacity expansion of the feeder road network, the assessment will analyze the macro-level effects of PATS on productive structures, supply chains, and technology diffusion in an effort to enhance the understanding of how well-maintained rural roads constitute an essential factor to expand the production and trade frontier of any given region or department in Peru. The assessment will seek to examine the efficacy of the management model's impact in fomenting citizen engagement, gender mainstreaming strategies, and road safety. Finally, it will include experimental design methodologies to examine the institutional capacity of municipalities in the design and management of transport microprojects, as well as the efficiency and sustainability of the microenterprise model.

C. Sustainability

35. The operational sustainability of the Project depends on the GoP's strategy on maintenance of rural roads. While there is a certain risk in ensuring the quality, continuity, and reliability of the local infrastructure interventions due to relatively low local capacities within the decentralized agenda, the GoP's strategy on maintenance has been consistently strong over the past decade, with increasing funding allocated each year through various channels: direct allocations to local governments; the creation of multiyear FONIE; and various programs implemented by the PVD, of which the PATS is just one. The overall principle, to also be implemented in this Project, is that

[10] The terms of reference (TOR) and methodology were discussed and agreed upon among the PVD, IADB, and the Bank.

all the roads rehabilitated or benefiting from periodic maintenance in past programs will undergo routine maintenance under the subsequent programs (for example, about 2,800 km or rural roads rehabilitated in the 2006–2013 operation supported by the Bank will be subject to routine maintenance in PATS). Following the management model established in previous programs, the maintenance activities will be executed in a decentralized manner. The earlier projects grew a system of community-formed microenterprises for the performance of routine maintenance on rehabilitated roads. The microenterprises are also required to maintain proper legal status, be registered, pay taxes, have bank accounts, develop internal operating procedures, and so on. They have been assisted in all these steps by the PVD and the PRIs. This approach to routine maintenance provided income and training opportunities for the poorest people, created community incentives for the work to be performed with good quality, and proved to be a cost-effective way of keeping the roads in good condition. There is thus a natural constituency for routine maintenance work to continue. The total number of microenterprises operating throughout the country is 857. Among the 5,700 members of these microenterprises, there is 28 percent woman participation. The Project will support a step forward in the microenterprise model by creating a certification program and thus increasing microenterprises' ability to carry out routine maintenance on paved rural roads and gradually become competitive as community associations.

V. KEY RISKS

Overall Risk Rating Explanation

36. **The overall risk for this Project is Substantial** despite being a continuation and consolidation of earlier programs aimed at the decentralization of the rural roads sector in Peru. The proposed US$600 million PATS is a more ambitious Project that entails a more substantial financial effort on the part of the government over a period of only five years. At the same time, even if the Bank's financial contribution to the program is only about 8.5 percent, under a co-financing arrangement, the monitoring of performance will be done for the whole program to ensure good practices. The risk is that such a large operation may not be executed in its entirety during the tight time frame.[11] The Bank, GoP, and IADB will be jointly accountable for the achievement of its full set of objectives.

37. **The institutional capacity for implementation and sustainability risks** are additional reasons for the Substantial risk rating. This includes the following risks:

(a) The implementation of the maintenance program through PRIs may delay the PATS implementation due to relatively weak institutional capacity to which is added the high rate of rotation of qualified staff. High-performing PRIs will be identified and used to support the poor-performing ones. In addition, selection of regions with higher capacity

[11] Also based on the experience of earlier programs financed by the Bank.

and better performance for project execution will be explored as a mechanism to ensure upfront disbursements and, therefore, early wins.

(b) Low ownership of PGs over PATS combined with weak institutional capacity to design, prioritize, and implement road plans aligned to the regional development objectives.

(c) The need to further support the PVD to evolve from mainly being an executing agency to functioning as a regulatory/promoting/supervision body in a decentralized environment. However, the Bank has a long-standing and generally successful history of support to Peru's ongoing strategy for rural roads decentralization and a long-term relationship with the PVD. The decentralization system is in place, although improvements are needed to ensure better governance, transparency, and management of resources. The PVD has ample experience in executing programs at the regional and municipal levels that are financed by international organizations. The Project will support the decentralized capacity in parallel with the PVD's own institutional strengthening.

38. **The Political and Governance Risk is rated as Substantial** since the culture of collaboration among institutions still needs to improve. Furthermore, the objectives at the central level (PVD, MTC) are not entirely harmonized with the realities and political interests of the local governments. Therefore, the Project will support close coordination between agencies and funds allocated for the same objective, for example, the integration of PATS standards into FONIE's mechanisms for investment selection; coordination with the Ministry of Foreign Trade and Tourism and *Provias Nacional* (National Roads Agency) on logistics corridors improvement; strengthening the dialogue between the PVD and local governments; and stronger integration of PRIs into the PGs. The Bank will serve as a catalyst during implementation. Within the Governance risk, the potential for fraud and corruption related to procurement and administration of civil works contracts at a local government level is moderate. Nevertheless, the scope of work involves many relatively small contracts. To mitigate this, there will be close Bank and IADB supervision of the procurement process and the Bank will work with the PGs and PRIs to establish transparency in sharing information, including advertising of contracts and dissemination of information about PATS. The Operational Manual (OM) will include measures to mitigate risks of fraud and corruption in procurement and contract management. Moreover, PATS will develop a communication system within the PVD's new unit, which will be in charge of communication, information access, and dissemination.

39. **The Technical Design Risk is rated as Substantial** due to the risk associated with the large number of small contracts spread across the country under this relatively large GoP program (US$600 million), part of which will be executed in a decentralized environment. The high number of small contracts that will have to be procured and supervised can result in high administrative burden. This risk will be somehow mitigated by the agreement with the PVD and IADB to procure

fewer and larger packages of civil works in Subcomponents 1.1 (Infrastructure for Social Inclusion) and 1.2 (Integration of the Feeder Network with Selected Logistic Corridors).

VI. APPRAISAL SUMMARY

A. Economic Analysis

40. The economic analysis of PATS, conducted by the PVD, assessed the economic viability of the two major physical components, namely Component 1 and Component 2, which account for 93 percent of the total Project investment and 90 percent of the Bank investment. The economic evaluation was based on a cost-benefit analysis following two distinct analysis tools. For Subcomponent 1.1, given the specificity of the interventions, focusing on a network characterized by very low levels of traffic (often less than 50 vehicles per day) and the absence of alternative routes, a producer surplus approach was used to calculate the benefits from PATS. For Subcomponent 1.2 and Component 2, a conventional road user surplus approach was applied.

41. The result of the analysis demonstrates that over 10 years, the net present value (NPV) at a 9 percent discount rate and the related internal rate of return (IRR) of the investments in PATS are estimated as S/. 271.4 million and 16.1 percent, respectively. The breakdown of each component is shown in table 1.

Table 1. Breakdown of NPV and IRR for Each Component

	NPV at 9% (S/., million)	**IRR**
Component 1.1	66.2	13.4
Component 1.2	167.5	17.4
Component 2	28.9	17.8
Total	**271.4**	**16.1**

42. The Project impact on CO_2 emissions is considered minimal. First, since the tertiary rural roads included in the program have very low traffic, the emission amount is limited. Second, the Project will contribute to further reduce vehicle emissions because vehicles will be able to drive at close to the optimum speed in terms of the CO_2 emission per km, which is around 50–70 km/h. Third, the Project is likely to induce some traffic demand, though this increase will be partially offset by the reduction of emissions as detailed above.

43. Public sector financing is an appropriate vehicle for PATS because all of the roads have low volumes of traffic, which makes it unsuitable to introduce private financing through tolling. While the CREMA pilot contract (Subcomponent 1.2) can promote further private sector involvement in road rehabilitation and maintenance through a longer-term contract, no private financing is expected.

B. Technical

44. The characteristics of the rehabilitation and maintenance activities to be carried out through the proposed program do not entail major technical difficulties. The technical characteristics will involve improvements to existing surfaces, drainage systems, and retaining walls to ensure a level of mobility tailored to the specific transport needs of the rural populations. There will not be any construction of new roads, which will allow PATS to maintain minimal environmental impact. In

addition, the program will finance economic pavement solutions (under Component 2 linked to logistics corridors and important production areas) on selected road sections, as an alternative to the unpaved structures. The criteria for road selection are well established for both Subcomponent 1.1, following FONIE's methodology, and Subcomponent 1.2, based on the main logistics corridors and strategic production areas, as well as for the Component 2. The detailed criteria established for road sections selection is presented in annex 2.

45. During previous programs supported by the Bank and IADB, a demand was created for higher standards in the interventions carried out. In particular, this was the case of the Regional Transport Infrastructure Decentralization Project (P078813) which ended up not being welcome by many subnational governments/RGs since they were seeking paved roads while the Project was not designed to provide such roads. To address this issue, PATS will seek to use low-cost structural designs. That means economic pavements, which will be halfway between an unpaved rural road and an asphaltic surface road, preferably using low-cost additives made within the country so as to promote development of the local industry.

C. Financial Management

46. PATS will be implemented by the PVD, which will be in charge of its FM aspects, including the following processes and procedures: planning, budgeting, accounting, internal controls, funds flow, financial reporting, and auditing. The Project will be carried out by using the existing operational capacity of the PVD, which is a solid institution with qualified staff and has developed sound financial processes and procedures during the previous projects financed by the Bank. The processes and procedures are substantially defined and will be reflected in the OM.

47. PATS' components and activities have been designed to be executed at both centralized and decentralized levels by the PVD and PGs and their bodies, respectively. However, both the Bank and IADB will finance only activities that will be implemented by the PVD at a centralized level.

48. The FM risk for PATS is considered Moderate, mainly because (a) the PVD is a solid institution that has both qualified and experienced staff in working with the Bank's and IADB's proceeds; (b) the external sources of funds will finance activities to be executed at a centralized level by the PVD; and (c) the PVD will complete the preparation of the FM chapter of the OM based on prior experience with similar projects implemented.

49. The FM assessment concluded that the PVD has the capacity to control the different sources of financing and the proposed FM arrangements can be considered adequate. A preliminary version of the FM chapter of the OM was prepared by the PVD before negotiation; however, the complete version of the OM is a condition of loan effectiveness.

D. Procurement

50. Procurement for PATS will be carried out in accordance with the Bank's '"Guidelines: Procurement of Goods, Works, and Non-consulting Services under IBRD Loans and IDA Credits & Grants' dated January 2011, revised July 2014; 'Guidelines: Selection and Employment of

Consultants under IBRD Loans and IDA Credits & Grants by World Bank Borrowers' dated January 2011, revised July 2014; and the provisions stipulated in the Loan Agreement.

51. The procurement activities will be carried out by the PVD, which has extensive experience in implementing projects under the Bank's procedures. The PVD will keep its existing capacity, which includes skilled staff in procurement. The Bank's financing will be focused on activities that will be carried out at the centralized level. A procurement assessment was finalized in June 2015 to examine the PVD's organizational structure, its facilities and support capacity, qualifications and experience of the staff who will work in procurement, record-keeping and filing systems, procurement planning and monitoring/control systems used, and the capacity to meet the Bank's procurement contract reporting requirements. The overall risk for procurement is Moderate. Annex 3 provides the mitigating measures proposed, as well as further Project procurement details.

E. Social (including Safeguards)

52. PATS will benefit the rural population of Peru, particularly local farmers and peasant communities (including indigenous communities), similar to previous projects, by facilitating access of the population from production centers to markets and/or social services. The Project is not expected to have significant social impacts or bear social risks. The civil works aimed at rehabilitation and improvement of rural roads are expected to be carried out within existing rights of way. The Project triggers both social safeguard policies, OP/BP 4.12 - Involuntary Resettlement and OP/BP 4.10 - Indigenous Peoples. The former was triggered because the civil works may exceptionally affect property assets and/or crops due to improvements to the roads; however, no physical displacement of people is expected since the program will address only existing roads. The latter was triggered because PATS is expected to also benefit indigenous communities among the rural population. As with previous projects, it will support the promotion of women in the road management processes, with an increased emphasis on their participation in the microenterprises for routine maintenance within rural communities and on creation of economic opportunities through the LLDWs financed by the operation.

53. In compliance with these policies and since details on the specific roads to be improved are not fully identified before appraisal, the PVD has prepared both a Resettlement Policy Framework and an Indigenous Peoples Planning Framework (IPPF). Both frameworks were cleared by the Bank and published in-country, on the PVD's website, http://www.proviasdes.gob.pe/index.html, and at the Bank's InfoShop on July 2 and July 13, 2015, respectively. To encourage feedback from indigenous national organizations, two indigenous people grassroots and nongovernmental organizations from the highlands and the Amazon have been invited to participate. Due to the 20-year-long history of Bank involvement in financing improvement and rehabilitation of rural roads in Peru and the overwhelming positive reception, more formal consultations were not deemed necessary.

54. The PVD will create a socio-environmental unit at its headquarters to ensure adequate conditions for the preparation, implementation, and supervision of safeguards-related instruments. The unit includes three specialists on environment, indigenous peoples, and resettlement. Recruitment of these specialists should occur within the first semester after loan effectiveness to ensure proper supervision of the implementation of the Bank's environmental and social

safeguards for selected samples of subprojects. The PVD will also include social specialists in their local offices when subprojects include areas with significant numbers of indigenous communities. The detailed institutional arrangements for the preparation, implementation, and supervision of safeguard instruments, as well as the procedures for clearance have been included in the respective frameworks and are summarized in annex 3.

F. Environment (including Safeguards)

55. The Project is classified as Category B since it is not expected to have either significant and irreversible environmental impacts or environmental risks. The Project triggers environmental safeguard policies OP/BP 4.01 - Environmental Assessment, OP/BP 4.04 - Natural Habitats, OP/BP 4.6 – Forests, and OP/BP 4.11 - Physical Cultural Resources. Given the unknown location of roads to be rehabilitated, the PVD has prepared an Environmental and Social Management Framework (ESMF) with guidance from the team's environmental specialist. The ESMF includes information on the PVD's institutional capacity for environmental and social management as well as for compliance with the Bank and IADB safeguards policies and national environmental regulations. The PVD will strengthen its current one-person social and environmental unit (paragraph 54). The ESMF describes the different roles and responsibilities on social and environmental management among the PVD, the *Dirección General de Aspectos Sociales y Ambientales* (General Directorate for Environmental and Social Matters [DGASA]) within the MTC, and the PGs. An advanced draft ESMF has been cleared by the Bank as fulfillment of the requirements for appraisal disclosure. It was published in-country on the PVD's website and at the Bank's InfoShop on July 2, 2015. The ESMP was consulted with DGASA on September 7, 2015, and further consultations with relevant stakeholders are on-going. Consultations with additional relevant stakeholders will include the Ministry of Environment, the National Protected Areas National Service, the Association of Municipalities of Peru *(Asociacion de Municipalidades del Perú*), and *Red Ambiental Peruana* (an environmental NGO network). These consultations will be held and finalized before December 8, 2015, and an updated ESMF will be disclosed in-country and at Infoshop including the results of such consultations.

56. The PVD's safeguards specialists (referred to in paragraph 54) will ensure adequate supervision of safeguards implementation and will address safeguards as one of the cross-cutting themes of PATS. These specialists will carry out field visits, provide safeguards training to the decentralized implementing bodies, and regularly report on safeguards implementation.

G. World Bank Grievance Redress Service

57. Communities and individuals who believe that they are adversely affected by a Bank-supported Project may submit complaints to existing project-level grievance redress mechanisms or the Bank's Grievance Redress Service. The Grievance Redress Service ensures that complaints received are promptly reviewed to address Project-related concerns. Project-affected communities and individuals may submit their complaint to the Bank's independent Inspection Panel, which determines whether harm occurred, or could occur, as a result of the Bank's noncompliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the Bank's attention and Bank management has been given an opportunity to respond. The following websites are available to file comments and complaints: http://www.worldbank.org/GRS and www.inspectionpanel.org.

Annex 1: Results Framework and Monitoring

Country: Peru

Support to the Subnational Transport Program Project (P132515)

Project Development Objectives

The Project development objectives are to (a) facilitate sustainable road access of Peru's rural populations to services, (b) reduce transport costs on rural roads linked to priority logistics corridors, and (c) strengthen decentralized road management.

PDO Level Results Indicators	Core	Unit of Measure	Baseline	Cumulative Target Values						Frequency	Data Source/ Methodology	Responsibility for Data Collection	Description (indicator definition)
				2016	2017	2018	2019	2020	End Target				
Indicator One: Share of rural population with access to an all-season road	☒	%	43	43	–	45	–	–	51.5	Beginning, midterm, and end of the Project	Rural Access Index (RAI) Methodology	PVD	Proportion of rural people in the program area who live within 2 km (20 minute walk) of an all-season road. This indicator is known as RAI. Baseline represents the latest available RAI for Peru. The target was calculated as a proportion between the estimated number of people living within 2 km distance from the road network in good condition at the end of the Project and the total rural population in the Project area.
Indicator Two: Reduced truck transit time from production to distribution centers on feeder roads integrated	☐	%	0	0	–	–	–	–	25	Beginning and end of the Project	Direct measurements by PVD	PVD	Currently it takes 2 hours to drive an average distance of 25 km or about 13 km/h. (Study Analysis of Logistics in Peru, 2015) Improved road condition will reduce the time by a minimum

to logistics corridors													of 30 minutes, that is, improving the distance coverage to about 17 km/h.
Indicator Three: Vehicle operating cost for trucks	☐	US$	0.79	0.79	–	–	–	–	0.42	At the beginning and end of Project	Economic Analysis	PVD	The baseline and target vehicle operating costs are based on the information provided by the MTC in the PATS' economic analysis. It is calculated as the weighted average for two-axle trucks moving on the rural roads linked to logistics corridors (Component 1.2).
Indicator Four: Roads in good and fair condition as a share of total classified roads	☒	%	55	55	55	57	58	59	60	Annual	PVD and PG reports	PVD	The percentage of the total classified rural road network in the program area that is in good and fair condition depending on the road surface and the level of roughness

INTERMEDIATE RESULTS

Intermediate Results Indicators	**Core**	**Unit of Measure**	**Baseline**	**Cumulative Target Values**						**Frequency**	**Data Source/ Methodology**	**Responsibility for Data Collection**	**Description (indicator definition)**
				2016	**2017**	**2018**	**2019**	**2020**	**End Target**				
Intermediate Result: Component 1: Infrastructure for Integration and Social Inclusion; and Component 2: Rural Road Infrastructure Maintenance													
Intermediate Indicator One:													
Direct Project beneficiaries	☒	Number (thousands)	0	40	240	640	1,040	1,100	1,100	Annual	Direct measurements by PVD	PVD	Final number to be calculated at the end of the Project as part of the Impact Evaluation Study
Of which females	☒	Percentage	0	51	51	51	51	51	51				
Intermediate Result: Component 1: Infrastructure for Integration and Social Inclusion													
Intermediate Indicator Two:													
Rural roads rehabilitated	☒	Km	0	0	0	1,200	2,000	2,200	2,200	Annual starting Year 3	PVD and PG reports	PVD	The cumulative length of all roads reopened to motorized

													traffic, rehabilitated, or upgraded under the Project
Intermediate Result: Component 2: Rural Road Infrastructure Maintenance													
Intermediate Indicator Three													
Length of roads under routine and periodic maintenance	☐	Km	0	230	2,690	3,680	4,680	5,000	5,000	Annual	PVD and PG reports	PG/PVD	Annual implementation reports
Intermediate Result: Component 3: Decentralized Road Management													
Intermediate Indicator Four													
Number of Projects approved under LLDWs	☐	Number	0	0	12	24	24	24	24	Annual starting Year 2	PVD and PG reports	PG/PVD	24 provinces with their local economic development plan elaborated and approved (12 Local Development Windows and 12 Logistics Development Windows)
Intermediate Indicator Five													
Percentage of PGs included in the program that have executed 80% of the multiyear road program	☐	%	0	0	10	20	25	25	80	Annual starting Year 2	PVD and PG reports	PG/PVD	From the 37 provinces included in PATS
Intermediate Indicator Six													
Number of microenterprises certified to perform routine maintenance services	☐	Number	0	0	100	200	200	200	200	Year 2 and 3	PVD reports	PVD	Number of microenterprises trained and certified for maintenance services in a program designed with universities

Annex 2: Detailed Project Description

Country: Peru

Support to the Subnational Transport Program Project (P132515)

1. The GoP has identified, in its Sector Strategic Plan for 2012–2014, a gap of US$37,760 million in the national infrastructure (15 percent of the gross domestic product), of which 37 percent (about US$14,000 million) represents the gap in the transport infrastructure. Of that gap, about US$6,600 million corresponds to the rural road network. Despite the advances in this field, investments in infrastructure and access to basic services remain deficient.

2. The PATS is a GoP program of US$600 million co-financed by a US$50 million Bank loan and a US$50 million IADB loan. It includes four components whose characteristics and activities are described below.

Component 1: Infrastructure for Integration and Social Inclusion (US$405.8 million, of which Bank financing is US$35 million)

3. Component 1 comprises the following two subcomponents:

- **Subcomponent 1.1: Infrastructure for Social inclusion (US$169.7 million, of which Bank financing is US$27.7 million).** This subcomponent will scale up the previous rural roads programs by prioritizing interventions in about 1,100 km of rural roads to promote accessibility and social inclusion of the poorest rural areas. These roads are located in 26 different provinces of 11 departments (see annex 7, map 1*)*. The beneficiary rural population is estimated to be 307,984. The average unit cost of intervention is estimated to be US$155,200 per km. The key features of this subcomponent are the following:

  (a) The main criteria for the roads selection under this subcomponent was inclusion in FONIE's program using mechanisms for investment selection and prioritization focused on the poorest, most isolated, and most vulnerable regions in the country, according to the poverty map in annex 7. To narrow down the selection process, the PVD introduced additional criteria related to (i) connectivity to public services; (ii) greater number of beneficiary villages and therefore a larger beneficiary population; (iii) connection to a logistics corridor prioritized by the MTC or to a feeder road; (iv) road section length greater than or equal to 10 km; (v) roads with no significant socio-environmental impacts; and (vi) pre-investment studies under preparation.

  (b) The interventions will be executed in a decentralized manner, following the system established and promoted during past programs, through the PRIs.

  (c) The rehabilitation and improvement will include road safety elements such as crash barriers, vertical road signs, sign posts, and so on, seeking the reduction of accident rates.

- **Subcomponent 1.2: Integration of the Feeder Network of Selected Logistic Corridors (US$236.1 million, of which Bank financing is US$7.3 million).** This subcomponent will support the MTC's competitiveness agenda of financing works and technical assistance activities to improve the navigability of subnational roads linked with or feeding into selected logistic corridors, with interventions to be carried out on networks of about 1,100 km of *caminos vecinales*. The objective is to better link important agricultural production areas to five priority logistics corridors: Chiclayo-Moyobamba-Tarapoto-Yurimaguas-Iquitos (Corridor 1); Matarani-Arequipa-Juliaca-Puno-Pte. Inambari (Corridor 5); Cusco Puerto Maldonado-Inapari (Corridor 8); Cusco-Juliaca-Puno-Desaguadero (Corridor 11); and Tarapoto-Aucayacu-Tocache-Tingo Maria (Corridor 12). The agricultural products targeted are coffee, cocoa, quinoa, potato, and alpaca fiber. The roads to be rehabilitated and/or improved are located in 14 different provinces of 5 regions (see annex 7, map 2*)*. The beneficiary rural population is estimated to be 779,819. The average unit cost of intervention using the economic pavements technology is estimated to be US$214,600 per km. The key features of this subcomponent are the following:

  (a) The specific criteria for road network selection is based on the value chain analysis of selected agricultural products for export, served by one of the above corridors, and will take into account the following criteria: (i) being part of the feeder network of prioritized logistic corridor; (ii) relation to the logistic corridors' value chain; (iii) relation to the above-mentioned products' value chain which concentrates high production volumes and large cargo transportation; (iv) road section length greater than 5 km related to the cargo transportation from production area to markets; and (v) roads with no significant socio-environmental impacts. These in turn will determine the type of rehabilitation needed: paved, unpaved, or economic pavement.

  (b) As in Subcomponent 1.1, elements for road safety, such as vertical signs or crash barriers, will be included.

  (c) This subcomponent will introduce CREMA on a pilot basis, to cover full networks for rural roads linking the production areas to the main logistics corridors.

  (d) Implementation under this subcomponent will be centralized, ensuring the appropriate implementation of the program with the new technological innovations.

Component 2: Rural Road Infrastructure Maintenance (US$151.9 million, of which Bank financing is US$10 million)

4. This component will finance activities to support an efficient and sustainable decentralized maintenance of the subnational road network. In particular, it will finance periodic and routine maintenance of about 2,800 km of rural roads rehabilitated in the previous program financed by the Bank and IADB, routine maintenance of 2,200 km of rural roads to be rehabilitated under this Project, the preparation of the related technical profiles, and supervision services. The key features of this component are the following:

(a) The criteria for the periodic and routine maintenance road selections are (i) rehabilitation during the previous program (PTRD); (ii) a maximum duration of seven years since rehabilitation; (iii) inclusion in FONIE's areas of interventions of extreme poverty; (iv) average section width of at least 5.5 m; (v) road section length of at least 15 km; (vi) formation of a network larger than 100 km with other roads; (vii) connection to basic services; and (viii) connection to public services.

(b) The average unit cost is estimated as follows: (i) US$35,720 per km for periodic maintenance; (ii) US$4,500 per km per year for routine maintenance; and (iii) US$15,000 per km per year for the levels of services methodology (see (d) below).

(c) The maintenance contracts will evolve from the classic form to the contracts by level of service, multiyear, and combined in lots so as to keep their number as low as possible and make supervision easier and more efficient. The related studies and supervision services will also follow the same pattern. Since these networks may belong to different regions or provinces, contract management will be a challenge in a decentralized environment and may thus involve RGs and/or the PVD.

(d) For both periodic and routine maintenance, depending on the technology sought (unpaved road or with an economic pavement) and the type of portfolio in which the intervention is framed (Social Inclusion or Integration of the Feeder Network of Selected Corridors), the Project may finance firms or microenterprises under extended (4 year) contracts. Table 2.1 offers a summary.

Table 2.1. Type of Maintenance Contract Based on Technology to be Used

Technology	Maintenance	Social Inclusion		Logistic Corridors	
		Contractor	Mode	Contractor	Mode
Unpaved	Periodic	Firm	Level of service	Firm	Levels of services
	Routine	Microenterprise	Level of service		
Economic pavements	Periodic	Firm	Level of service		
	Routine				

(e) Following the management model established in previous programs, maintenance activities will be executed in a decentralized manner and routine maintenance activities will be carried out through microenterprises, formed by residents from the surroundings of the areas intervened.

Component 3: Decentralized Road Management (US$26.7 million, of which Bank financing is US$4.65 million)

5. This component will finance technical assistance, training, and equipment at both the subnational (RG/PG) and central (PVD) levels to support the consolidation of the decentralized transport management agenda. It will include five main subcomponents: (a) strengthening the capacity of RGs/PGs in road transport management; (b) institutional strengthening of the PVD; (c) development and implementation of a capacity-building program for routine maintenance through microenterprises; (d) design and implementation support[12] for LLDWs; and (e) PATS monitoring

[12] The Project will not finance, however, the sub-projects developed through the LLDWs except for two pilots.

and evaluation, including implementation of an information and reporting system. More specifically, the five subcomponents are detailed as follows:

(a) Strengthening the capacity of RGs/PGs in road transport management will include assistance to 194 provinces in road planning, prioritization, selection, and programming of assigned budgets; execution of road projects in accordance with the PGs' multiyear programs; development of standards to regulate the main functions, processes, and procedures of PGs; development of road plans that include the three cross-cutting areas promoted by PATS (socio-environmental monitoring and mitigation of related risks; road safety including awareness and accident prevention programs for rural population; and strengthening of women's participation in rural transport programs); and provision of basic logistical equipment for the rural roads management.

(b) The institutional strengthening of the PVD contemplates its evolution from an executing agency to a regulatory/promoting/supervising body in parallel with continuing to strengthen the PGs. Activities include technical assistance and training to improve engineering, results management and strategic planning skills, along with strengthening knowledge in the areas of poverty, transport logistics, public policies, and the three cross-cutting themes. An institutional strengthening plan will be prepared by the PVD, including its restructuring capacity plan. The plan will be implemented during the program's life.

(c) Capacity building for routine maintenance will continue the strategy promoted by previous projects to develop rural organizations (with a focus on participation of women) as a mechanism that serve two main purposes: sustainable maintenance of the rural roads network and generation of employment for social inclusion. PATS will move the strategy to the next level by providing assistance and certification of microenterprises in contract management and technical expertise, to promote competitiveness, and in parallel developing the capacity of PGs—through their technical road units—in monitoring and supervision of the maintenance.

(d) The LLDWs are instruments to be designed and implemented with the ultimate goal of maximizing the impact of rural road interventions on poverty reduction and competitiveness. PATS will scale up the model of LDWs developed during the Second Rural Roads Project by accelerating the emergence of productive activities in the areas where transport conditions have been improved. The LLDWs will provide assistance to associations of small rural producers (incentivizing participation of women) to identify and develop business plans aligned to the local (social and/or logistics-oriented) development strategies. LLDWs will be developed in 24 provinces, with two demonstrative pilots that will support the plans through implementation.

(e) Project monitoring and evaluation is one of the key elements of the operation, in the context of the new GoP's policy of management for results. This activity will create a system to measure the program progress in relation to its products and expected results, through a systematic process of data collection, reporting, and analysis of results, including independent procurement reviews.

Component 4: Project Management (US$15.7 million, of which Bank financing is US$0.35 million)

6. This component will cover the PATS incremental administrative costs, including staff, audits, information dissemination, training related to program activities, and operational support through consulting services. The Project will be managed by the PVD in close coordination with other ministries, such as the Ministry of Development and Social Inclusion, MTC, and MEF. The only activity financed by the Bank and shared with the IADB will be the external audit of the Project.

Annex 3: Implementation Arrangements

Country: Peru

Support to the Subnational Transport Program Project (P132515)

Project Institutional and Implementation Arrangements

1. **General**. The borrower of the loan will be the Republic of Peru. As in previous Bank-financed projects in rural roads, the PVD will be the implementing agency and will have overall responsibility for PATS, including all activities, internal and external communications, FM, procurement, and compliance with the safeguards policies. A PCG lead by a coordinator will be in charge of the daily implementation within the current organizational structure of the PVD. During implementation the PVD will work toward a new organizational structure that will enable it to better administrate large and complex operations; a number of qualified staff should be hired to join the implementation team to efficiently manage PATS.

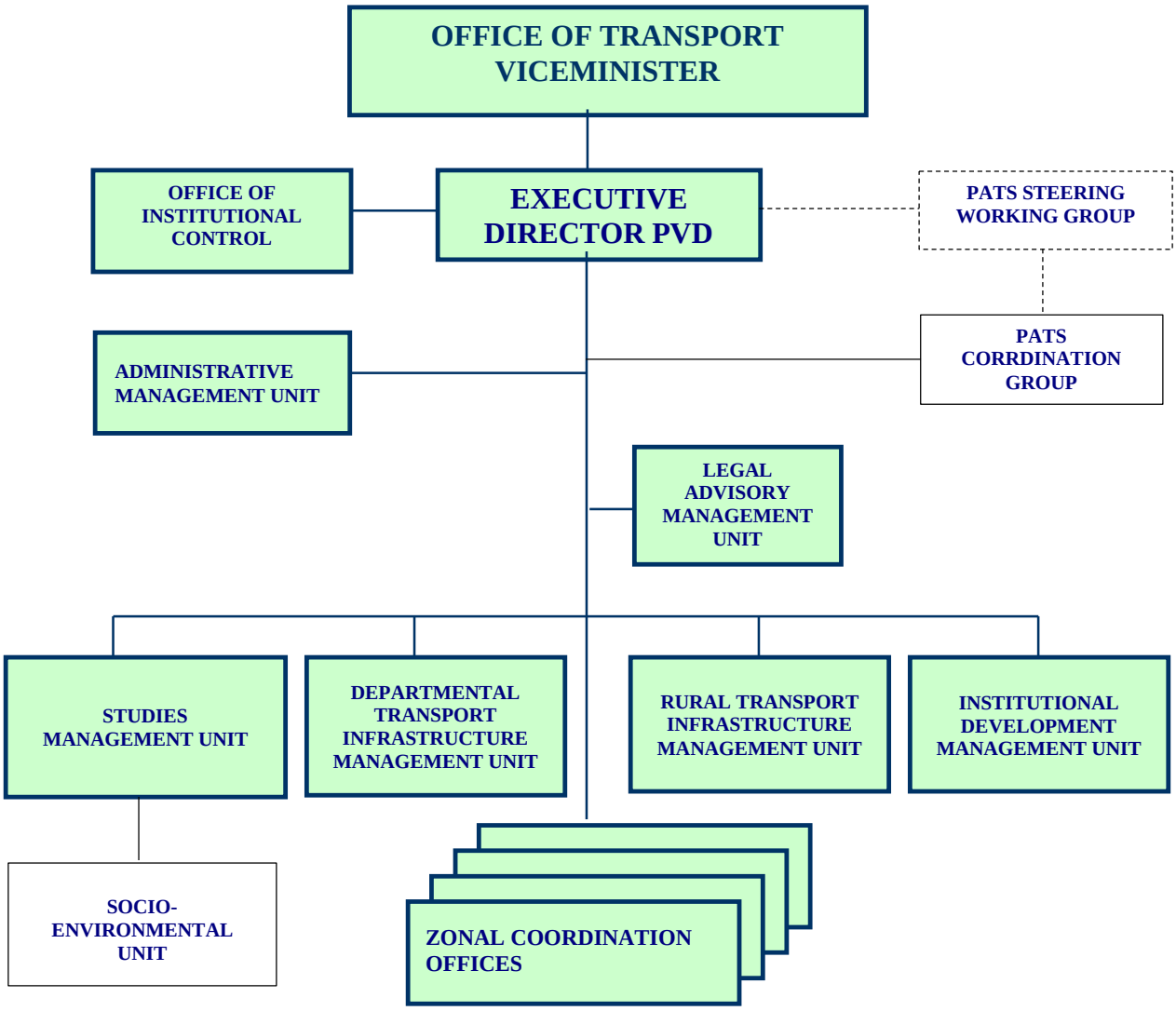
2. **National level**. The PVD will be in charge of the following functions: (a) preparing an Annual Operating Program based on all the investment components and sending it to the financing banks no later than 60 days after the end of each fiscal year; (b) signing agreements with the PGs based on three years road transport planning; (c) assessing, monitoring, and supervising the performance of the PRIs; (d) assisting in the preparation of TORs, supervision of bidding and/or selection processes for civil works, goods and consulting services, and goods for the Subcomponent 1.1 through the PRIs of levels[13] III and IV, and carrying out similar activities in a centralized manner for PRIs of levels I and II; (e) preparing the TOR and bidding documents and selection of consultants for the Subcomponent 1.2 based on a comprehensive logistic plan on the key logistics corridors with RGs and PGs; (f) preparing Project accounting and financial information; (g) managing administrative, financial, and accounting activities; (h) managing payments and preparing disbursement requests; (i) preparing Project financing reports for the banks according to agreed norms and procedures; (j) monitoring and evaluation of progress under the Project and reporting to the MTC and the banks; and (k) ensuring that all activities and procedures comply with the Project OM. The OM will provide specific details related to the program's institutional setup, procurement, monitoring and evaluation, safeguard policies, and financial accounting procedures, as well as the transferring of resources to the PGs and PRIs. The OM and its adoption are a condition of effectiveness of the Loan Agreement.

3. Additionally, the PVD will interact closely with relevant departments within the MTC—in particular the Office of Planning and Budgeting—on specific issues such as road classification and hierarchy, traffic safety, gender, and social and environmental policies with the DGASA.

4. The implementation timeframe of PATS is expected to be five years. Figure 3.1 outlines the general institutional arrangements for Project execution.

[13] A 2013 evaluation of the capacities of the PRIs classified them into four categories, from IV to I. The program aims at strengthening the capacity of the PRIs of levels I and II so that they can bring better technical support to the PGs and be able to prepare technical documentation and support the routine maintenance activities through microenterprises.

Figure 3.1. PATS Institutional Arrangements



5. **Provincial level.** While the overall responsibility for the implementation of PATS will rest with the PVD, parts of it will be executed in a centralized manner by the PVD and other parts in a decentralized manner by the PGs and their technical bodies (see table 3.1). Both PGs and RGs will receive technical assistance and institutional capacity-building support from the PVD as part of Component 3.

Table 3.1. Institutional Responsibilities

PATS Execution	Management of the Social Inclusion Subcomponent		Management of the Logistics Corridors Subcomponent	
	Decentralized	Centralized	Decentralized	Centralized
Feasibility	–	√	–	√
Design	–	√	–	√

PATS Execution		Management of the Social Inclusion Subcomponent		Management of the Logistics Corridors Subcomponent	
		Decentralized	**Centralized**	**Decentralized**	**Centralized**
Execution of civil works	Stabilized pavement	√ Local government with the PRI (III, IV)	√ Local government with the PRI (I, II)	–	√
	Asphaltic coating	–	–	–	√
Periodic maintenance		√ Local government with the PRI (III, IV)	√ Local government with the PRI (I, II)	–	√
Routine maintenance	Contracts with microenterprises	√ Local government with the PRI (I, II, III, IV)	–	√ Local government with the PRI (I, II, III, IV)	–

Eligibility for Program Funding

6. A framework agreement *(convenio marco*) will be signed between the PVD and each PG describing the overall Project principles and conditions. On the basis of the framework agreements, there will be financing agreements (*convenios de financiamiento*) to be signed between the PVD, the PGs, and/or the PRIs establishing the financing details for road rehabilitation, improvement, and periodic and routine maintenance works on a yearly basis, in case of decentralized execution of the Project. When initiating disbursement in a particular province, the PVD will furnish to the financing banks a report confirming that the respective agreements have been prepared and approved.

Allocation of Project Resources among Provinces

7. Resources for road rehabilitation—improvement and maintenance—executed by the PGs are preassigned to the PGs based on a methodology to be included in the OM.

Financial Management, Disbursements, and Procurement

Financial Management

8. An FM assessment was performed in accordance with OP/BP10.00 and the Financial Management Manual for World Bank Investment Project Financing Operations,[14] to determine the adequacy of the FM arrangements for the implementation of PATS. This section presents a general description of the FM arrangements defined by the PVD.

A. Summary of the FM Arrangements

[14] FM assessment performed in accordance with the OP/BP 10.00 and the FM manual 'Financial Management Manual for World Bank Investment Project Financing dated December 11, 2014.

9. The PVD will be in charge of the FM aspects, including the following processes and procedures: planning, budgeting, accounting, internal controls, funds flow, financial reporting, and auditing. PATS will be implemented using the existing operational capacity of the PVD, which is a reliable institution that counts with qualified staff and has developed sound financial processes and procedures during previous projects financed by the Bank. The processes and procedures are substantially defined and will be reflected in the OM under preparation by the PVD.

10. The Project components and activities have been designed to be implemented by the PVD at centralized and decentralized levels, with the participation of subnational government entities. However, IADB and the Bank reached an agreement with the GoP to use external sources of funds to finance only activities that will be implemented by the PVD at a centralized level.

11. The FM risk is considered moderate, mainly because (a) the PVD is a reliable institution that has both qualified staff and staff experienced in working with Bank and IADB funds; (b) external sources of funds will finance activities at a centralized level by the PVD; (c) the PVD will complete the preparation of the FM chapter of the OM based on prior project experience.

12. The FM assessment concludes that the PVD has the capacity to control the different sources of financing and the proposed FM arrangements can be considered adequate. A preliminary version of the FM chapter of the OM was prepared by the PVD before negotiations; however, the final version of the complete OM is considered a loan effectiveness condition.

B. Detailed FM Arrangements

13. **Organizational arrangements and staffing**. The PVD is the executing entity of the MTC. Additionally, the PVD is entitled with technical, administrative, and financial autonomy and will be responsible for the FM functions of the Project, which include the following aspects: planning, budgeting, accounting (using the financial system *Sistema Integrado de Administración Financiera* (Integrated System of Financial Management [SIAF]) and the PVD's customized system, funds flow, internal controls, financial reporting, and auditing arrangements. The PVD's fiduciary staff has experience with Bank and IADB financed operations and its administrative and accounting unit is composed of 26 staff members; however, currently some positions are vacant and the PVD will need to recruit additional staff to cover all the positions under its current organizational structure. In addition to recruiting staff for vacant positions, an additional financial specialist will need to be recruited, with the TOR approved by the Bank.

14. Some PATS components will be implemented at a centralized level by the PVD and other components/activities will be implemented at a decentralized level by the PGs with the support of the PRIs. As part of the implementation arrangements, the Bank and IADB have agreed with the GoP that the external source of funds will only finance activities implemented at a centralized level by the PVD. Therefore, the PVD will manage the external funds without the need to transfer funds to the local government entities.

15. The Bank will provide FM training to the PVD's FM staff. In addition, the subnational entities participating in the program will also require capacity training in FM aspects and public budget management and the Bank can provide this training. Detailed roles and responsibilities of

the PVD and other participant entities will be reflected in the OM before effectiveness with the approval of IADB and the Bank.

16. **Planning and budgeting.** The preparation of the annual program and budget will follow local regulations established by the MEF through the *Direccion de Presupuesto Publico*. The PVD will prepare the Project annual plan, procurement plan, and budget. Project budget recording and later execution through the SIAF will be under the PVD's Planning Office. Planning and budgeting will be in line with the general government procedures regulated by the Annual Budget Law, which is operated under the SIAF. For all components, the PVD will develop a comprehensive operational plan segregating activities that will be implemented in a centralized or decentralized manner. The PVD will also review the annual operational plan elaborated by the subnational entities participating in the Project and will consolidate all of them. The consolidated plan for year n+1 will be the basis for the Project budget formulation.

17. The FM action plan includes the preparation of the OM (including the FM chapter), which will require the Bank's no-objection before effectiveness.

18. **Accounting and information system**. PATS will be implemented in accordance with (a) the National Control System which is regulated by the Supreme Audit Institution (*Contraloria General de la Republica* [Comptroller General's Office], CGR), and (b) the National Accounting System which is regulated by the accountant general. The chart of accounts will be based upon the *Plan Contable Gubernamental del Sistema Nacional de Contabilidad* and adequately adapted to reflect the functionality of the Project components, activities, and multiple sources of funds. The PVD has demonstrated (during previous project implementations) that it has the capacity to maintain adequate accounting records and control different sources of financing. The Project will follow similar accounting processes and procedures to record all transactions irrespective of their source of financing: Bank, IADB, and counterpart funds (including PG funds).

19. **Financial information system.** The PVD's planning and budgeting, as well as the recording of accounting transactions and treasury functions will be done under the SIAF, in line with the general government procedures and in local currency. In addition to the SIAF, the PVD uses SIGAT, which is the PVD's suitable and efficient financial information system that works in parallel with the SIAF. The SIGAT covers those financial and administrative areas not covered by the SIAF such as personnel, travel, logistics, financial accounting, and financial reports in US$ required by the Bank, inventory, subnational co-financing, legal contracts, and procurement. The system is compatible with the SIAF and enables an automatic transfer of information to the SIAF.

20. **Internal controls.** The PVD will have to comply with internal control standards issued by the CGR. In addition, the PVD will have to comply with its own internal control procedures. Some adjustments to strengthen the procedures used during implementation of previous projects have been discussed and agreed for further efficiency, specifically for timely recording of transactions in the SIAF-SIGAT. The updating of the processes and procedures are still pending; they will be detailed in a new OM, mainly considering the new subnational entities (PGs and PRIs) and the flow of funds arrangements for the cases of the decentralized components financed by local funds.

21. **Financial reporting.** The PVD is responsible for preparing all the financial statements and the reports required for ensuring that all necessary information is available for decision

making, auditing, and supervision. Subnational entities will be responsible for submitting all the necessary information required by the PVD and PVD will have the responsibility for the preparation of a single set of Project financial statements acceptable to the banks. Additionally, Project financial reports will be prepared under the cash accounting basis based on the SIAF and SIGAT information and transactions classified by project component/subcomponent.

22. The Project interim financial reports should include (a) a brief background of the project status as of the end of each period; (b) a statement of the source and use of funds; (c) a statement of the cumulative investment with a cash forecast for the next period; and (d) reconciliation of the designated account. These reports will be submitted on a semiannual basis, no later than 45 days after the end of each calendar semester

23. On an annual basis, the PVD will prepare (a) the project financial statements, including cumulative figures for all sources of financing, for the year and as of the end of the year (as mentioned in paragraph 22) and (b) a statement of expenditure (SOE). The financial statements should include explanatory notes in accordance with the Cash Basis International Public Sector Accounting Standard and the PVD's assertion that funds were used in accordance with the intended purpose of the Project.

24. Specific details of content and format of Project interim financial reports will be reflected in the OM.

25. **Auditing arrangements.** Annual Project financial statements will be audited by an independent private firm following International Standards on Auditing and in accordance with the TORs acceptable to the Bank and IADB.

26. In accordance with the Memorandum of Understanding signed between the Bank and CGR, the appointment of external auditors will follow procedures established by the CGR. The TOR and auditing arrangements will be harmonized with the IADB. The contracting period of the audit firm will be requested for the entire period of Project implementation while each audit period will be of one fiscal year or a period agreed with the Bank. The report will be submitted to the Bank no later than four months after the end of each fiscal year and will be financed out of loan proceeds. In accordance with the Bank's Access to Information Policy, audited financial statements of the Project will be made publicly available. The types of opinions that will be included in the audit report are listed in table 3.2.

Table 3.2. Type of Opinion and Proposed Deadline for an Audit Report

Type of Opinion	Proposed Deadline
1. Opinion on Project financial statements 2. Special opinion on SOEs	Four months after the end of each fiscal year
3. Adequacy of the internal control of the implementing agency in relation to the Project	

27. **Flow of funds and disbursement arrangements.** The Bank will disburse loan proceeds using the following disbursement methods: (a) advance, (b) reimbursement, and (c) direct

payment. The Bank loan proceeds will follow the Bank's disbursement methods, policies, and procedures described in the Disbursement Letter and the disbursement criteria described below.

28. The PVD will open a designated account in U.S. dollars in the *Banco de la Nacion*. Fund advances will be made initially on the basis of a six-month forecast of Project expenditures and the ceiling for the advance account will be adjusted on the basis of a six-month forecast for the following semester. During implementation, reporting on the use of advances will be supported by SOEs. In the case of reimbursement and direct payment methods of disbursement, supporting documentation required will be as defined in the Disbursement Letter. All withdrawal applications will be supported by appropriate documentation. All supporting documentation of expenditures and records will be retained by the PVD and made available to the Bank during Project supervision missions and to the external auditors.

29. For counterpart funds, the PVD has a single bank account where it receives all funds allocated by the MTC according to the budget approved, from which payments will be processed under the Project through checks or deposits into the bank accounts of suppliers and will be recorded in the SIAF-SIGAT.

30. Components/activities to be implemented at the subnational/PG level will be financed 100 percent by local source of funds.

Table 3.3. Table of Loan Proceeds

Category	Amount of the Loan (US$)	Percentage of Expenditures Financed (Inclusive of Taxes)
1. Goods, works, non-consulting services, and consultants' services for Component 1 of the Project	35,000,000	100
2. Goods, works, non-consulting services, and consultants' services for Component 2 of the Project	10,000,000	100
3. Goods, non-consulting services, and consultants' services for Component 3 of the Project	4,650,000	100
4. Consultants' services for Component 4 of the Project	350,000	100
TOTAL AMOUNT	50,000,000	

31. **Bank supervision.** FM supervision would include on-site and off-site supervisions. On site supervision missions will be carried out at least twice a year to the possible extent during the first year and later calibrated to twice a year. Off-site supervisions will comprise desk reviews of interim financial reports and audited financial statements.

Procurement

A. General

32. Procurement for PATS will be carried out in accordance with the Bank's 'Guidelines: Procurement of Goods, Works, and Non-Consulting Services under IBRD Loans and IDA Credits & Grants by World Bank Borrowers' dated January 2011 and revised July 2014; 'Guidelines: Selection and Employment of Consultants under IBRD Loans and IDA Credits & Grants by World Bank Borrowers' dated January 2011 and revised July 2014; and the provisions stipulated in the Loan Agreement. For each contract to be financed by the loan, the different procurement methods or consultant selection methods, the need for pre-qualification, estimated costs, prior review requirements, and time frame are agreed between the borrower and the Bank in the Procurement Plan. The borrower has prepared a detailed and comprehensive Procurement Plan for the first 18 months of Project implementation, including all contracts for which bid invitations and invitations for proposals are to be issued. The Procurement Plan will be available in the *Sistema de Ejecución de Planes de Adquisiciones* (System of Implementation of Procurement Plans). Goods and works shall be procured under contracts awarded on the basis of International Competitive Bidding (ICB), National Competitive Bidding (NCB), Shopping, or Direct Contracting (DC). Consultants' services shall be procured under contracts awarded on the basis of Quality- and Cost-Based Selection, Quality-Based Selection, Selection under a Fixed Budget, Least Cost Selection, Selection Based on the Consultants' Qualifications, Single Source Selection, and procedures set forth in Section V of the Consultant Guidelines for the selection of Individual Consultants, including Sole Source Selection for Individual Consultants.

B. Assessment of the Agency's Capacity to Implement Procurement

33. **Agency**. Following the implementation arrangements, the PVD will be responsible for the administration of the Project, including procurement, disbursement, and FM matters of this operation. The PVD is adequately staffed and will maintain its capacity to conduct procurement under this operation.

34. An assessment of the PVD's capacity to implement procurement activities for the Project was completed in June 2015. The capacity assessment looked into the PVD's (a) organizational structure, (b) facilities and support capacity, (c) qualifications and experience of the staff who will work in procurement, (d) record-keeping and filing systems, (e) procurement planning and monitoring/control systems used, and (f) capacity to meet the Bank's procurement contract reporting requirements. It also reviewed the procurement arrangements proposed in the Procurement Plan.

35. Considering the country and the PVD's procurement capacity, the overall risk for procurement is rated Moderate. The corrective mitigating measures proposed are presented in table 3.4.

Table 3.4. Mitigating Measures and Stages

Mitigating Measures	Stage
An OM satisfactory to the Bank	Before effectiveness
A Procurement Plan for the first 18 months, satisfactory to the Bank	Completed
Use of the *Sistema de Ejecución de Planes de Adquisiciones* (System of Implementation of Procurement Plans) as the system to monitor the Procurement Plan	To be carried out during Project implementation

Procurement review conducted by independent auditors and/or Bank staff	

Procurement Special Provisions

36. In addition and without limitation or restriction to any other provisions set forth in this section or the Procurement Guidelines, the following provisions shall govern the procurement of goods and works with NCB procedures:

(a) Foreign bidders shall not be required to be locally registered as a condition of participation in the selection process.

(b) No reference value shall be required for publication in the bidding documents or used for evaluation.

(c) Award of contracts shall be based exclusively on price and, whenever appropriate, shall take into account factors that can be quantified objectively, and the procedure for such quantification shall be disclosed in the invitation to bid.

(d) Foreign bidders shall be allowed to participate in NCB without restriction and shall not be subject to any unjustified requirement which will affect their ability to bid such as, but not limited to, the requirement to authenticate their bidding documents or any documentation related to such bidding documents with either Peruvian Consulates, the Ministry of Foreign Affairs, or any Peruvian authorities as a prerequisite of bidding.

(e) The borrower shall use standard bidding documents and standard evaluation formats, all satisfactory to the Bank.

37. In addition and without limitation or restriction to any other provisions set forth in this section or the Consultant Guidelines, the following provisions shall govern all employment of consultants:

(a) Foreign consultants shall not be required to be locally registered as a condition of participation in the selection process.

(b) Foreign consultants shall not be required to authenticate any documentation related to their participation in the selection process with either Peruvian Consulates, the Ministry of Foreign Affairs, or any Peruvian authorities as a condition of participation in said selection process.

(c) The borrower shall use standard requests for proposals and standard evaluation formats, all satisfactory to the Bank.

(d) Foreign consultants, either individuals or firms, shall not be required to pay fees to the Peruvian Consultants' Association that are different from those required for Peruvian consultants.

(e) No consultant hired for the Project, at the time he or she is carrying out his or her contractual obligations as consultant, may hold civil service office or any other position in any agency of the borrower, nor shall such consultant have any right to reentry into any such office or position upon the conclusion of his or her consulting services.

38. **Annual procurement external reviews**. The borrower shall (a) have all the procurement records and documentation for each fiscal year of the Project reviewed, in accordance with appropriate procurement review principles, by independent reviewers acceptable to the Bank; (b) furnish to the Bank as soon as available, but in any case not later than six months after the end of each fiscal year, the procurement external review report of the review by the independent reviewers, of scope and in detail as the Bank shall reasonably request and; (c) furnish to the Bank other information concerning procurement records and documentation and the procurement review as the Bank shall, from time to time, reasonably request.

C. Procurement Plan

General

Bank's approval date of the Procurement Plan: October 21, 2015

Date of General Procurement Notice: Q3, 2016 (expected)

Period covered by this Procurement Plan: 1.5 years

Goods, Works, and Non-consulting Services

39. **Prior review threshold**: Procurement decisions subject to prior review by the Bank as stated in Appendix 1 to the Procurement Guidelines are detailed in table 3.5.

Table 3.5. Thresholds for Procurement Methods and Prior Review (US$, thousands)

Expenditure Category	Contract Value (Thresholds) (US$, thousands)	Procurement Method	Contracts Subject to Prior Review
1. Works	> 10,000	ICB	All
	250–10,000	NCB	None
	< 250	Shopping	None
	> 100	DC	All
2. Goods	> 500	ICB	All
	50–500	NCB	None
	< 50	Shopping	None
	> 100	DC	All

Table 3.6. Works Summary of Procurement Packages

Ref. No.	Description	Estimated Cost (US$, millions)	Packages	Domestic Preference (Yes/No)	Review by Bank (Prior/Post)	Comments
CIVIL WORKS						

1.	Improvement of rural road: Acobamba - Huironay - Ccerabamba-Abra Cuzqueña	3.91	1	No	Post	–
2.	Maintenance of rural roads (Performance-based contracting)	30.98	1	No	Prior	–
GOODS						
3	IT equipment	0.30	1	No	Post	–
4	Vehicles	0.50	1	No	Post	–

Selection of Consultants

40. **Prior review threshold**: Selection decisions subject to prior review by the Bank as stated in Appendix 1 of the Consultant Guidelines are listed in table 3.7.

Table 3.7. Thresholds for Methods and Prior Review (US$, thousands)

Consulting Services	Contract Value (Thresholds) (US$, thousands)	Procurement Method	Contracts Subject to Prior Review
a. Firms	> 100	QCBS, QBS, FBS, LCS	First and > 1,000; < 1,000 only TOR
	< 100	QCBS, QBS, FBS, LCS, CQS	Only TOR
	> 100	SSS	All
b. Individuals		Comparison of 3 CVs in accordance with Chapter V of the Guidelines	> 300; < 300 only TOR

Note: QCBS = Quality- and Cost-Based Selection; QBS = Quality-Based Selection; FBS = Fixed Budget Selection; LCS = Least-Cost Selection; CQS = Selection Based on Consultants' Qualifications; SSS = Single Source Selection.

41. **Short list consisting entirely of national consultants**. The short list of consultants, whose services are estimated to cost less than US$350,000 equivalent per contract, may consist entirely of national consultants in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines.

Table 3.8. Consultancy Assignments with Selection Methods

Ref. No.	Description of Assignment	Estimated Cost (US$, millions)	Processes	Review by Bank (Prior/Post)
Firms				
1.	Detailed design of the road: lchipia-Televan	0.42	1	Post

2.	Detailed design of the road: Emp. CU-126 (Sector Achupani)-Emp. CU-785E (Kayno)	0.23	1	Post
3.	Detailed design of the road: Pte. Checca-Pte. Asunción-Chitibamba-Emp. CU-126 (Comunidad Huinchiri-Quehue)	0.19	1	Post
4.	Detailed design of the road: Vinchos-Paccha-Andabamba	0.15	1	Post
5.	Implementation of LDW action plan	0.30	6	Post
6.	Supervision of improvement works of rural road: Pacobamba-Huironay-Ccercabamba-Abra Cuzquena	0.40	1	Post
7.	Supervision of maintenance of rural roads (Performance-based contracting)	3.04	1	Prior
8.	Baseline of impact evaluation	0.60	1	Post
9.	Financial audit	0.14	1	Post
Individuals				
Procurement independent external reviews		0.01	5	Post

Supervision of PATS

42. In addition to the prior review supervision to be carried out by the Bank, annual field supervision missions will be carried out for the post review of procurement activities.

Environmental and Social (including safeguards)

43. The borrower has prepared the social frameworks for OP 4.10 - Indigenous Peoples and OP 4.12 - Involuntary Resettlement as well as an ESMF in compliance with OP 4.01. Those frameworks (IPPF, RFPand ESMF) are in line with both Bank and IADB safeguard policies and will be applied regardless of the source of subproject financing.

44. The PVD will create a socio-environmental unit at their headquarters that will include two social specialists (indigenous peoples and resettlement) and one environmental specialist, who will be responsible for supervising and reporting on the implementation of the respective safeguards. In the PVD local offices (*Oficinas de Coordinacion Zonal*) in areas where there is high density of indigenous communities, the PVD will hire social specialists to support the processes of consultation and indigenous peoples' participation in the Project. The PVD will also ensure that the TOR for civil works contracts and their supervision benefit from the inputs of socio-environmental specialists.

45. The preparation and implementation of Resettlement Action Plans (RAPs) for road improvement and rehabilitation projects directly managed by the PVD will be carried out by the PVD specialists and, in accordance with national legislation, will be approved by the DGASA as

part of the approval of environmental instruments. The DGASA is the sole environmental authority in the transport sector in Peru; it is responsible for issuing environmental licenses for all rehabilitation works on the basis of partial Environmental Impact Assessments or Environmental Impact Statements submitted by Project proponents. Environmental licenses issued by PGs will not be considered under this Project since environmental competences on transport issues have not yet been transferred/decentralized. The activities delegated to PGs will include, in the packages of civil works contracts, the requirements for the preparation of RAPs, as needed, approved by the DGASA. The clearance procedures of the RAPs will be included in an agreement between the PVD and DGASA, to ensure timely review and approval of RAPs.

46. The preparation and implementation of Indigenous Peoples Plans for road improvement and rehabilitation projects will be carried out by the PVD specialist in collaboration with the social specialists assigned to the local offices of the PVD in those areas with high density of indigenous peoples. The plans will document the consultation with and participation of the indigenous communities in Project benefits.

47. Both social frameworks were cleared by the Bank and disclosed in-country and at the InfoShop. Although the IPPF was not formally consulted due to the 20-year history of involvement of the Bank in the financing of rural roads in Peru and the overwhelming positive reception these have had, two representative national indigenous peoples organizations—namely *Asociación Interétnica de Desarrollo de la Selva Peruana* and *Centro de Culturas Indíg–nas del Perú*—have been invited to provide feedback on the Indigenous Peoples Plans. None had any comments.

Monitoring and Evaluation

48. The PVD, through its PCG, will be responsible for PATS monitoring and evaluation at the centralized level. The results will be widely disseminated with the stakeholders including the PGs involved. According to PATS' institutional arrangements for implementation, the PCG will be attached to the PVD's Monitoring and Evaluation Unit (figure 3.1) which is specialized in all of the PVD's programs data collection, monitoring, evaluation, and dissemination. The PVD has prepared a comprehensive Results Chain Framework by components, products/activities, expected effects, and expected impacts. The Results Framework included in annex 1 of this document forms part of that more extensive (with several more indicators) framework. The Results Chain Framework also includes the indicators to be measured in the impact evaluation study, for which the baselines are not yet known. Proposed indicators are straightforward and relatively easy to quantify. The final number of direct beneficiaries, disaggregated by gender, will be captured through the impact evaluation study. The PVD is expected to carry out the Project monitoring and evaluation in a satisfactory manner, given its past experience with this activity.

Role of Partners

49. PATS has been prepared by the Bank in partnership with the IADB, which co-financed all the previous projects on rural roads in Peru. The collaboration has consisted of joint preparation missions, joint advice to the borrower, and joint fiduciary requirements for implementation, including one OM, one Procurement Plan, and joint Safeguards Frameworks. Both the Bank and IADB are co-financing the operation with US$50 million each and have agreed to support, in equal proportion, the same components and subcomponents. The Bank and IADB will each finance up

to 100 percent of selected contracts in three of the four Project components; the details will be provided in the OM and in the Procurement Plans agreed for every year.

Annex 4: Implementation Support Plan

Country: Peru

Support to the Subnational Transport Program Project (P132515)

Strategy and Approach for Implementation Support

1. The strategy for implementation support has been developed based on the design of the Project and its risk profile, as well as on actions to be taken during implementation. This strategy is a flexible tool that may be amended during PATS supervision and in response to the borrower's changing needs.

2. There has been a long-standing partnership between the Bank and the GoP and its MTC and PVD. The PVD has been the implementing agency in the recently closed PTRD and the *Programa Caminos Descentralizado* (Regional Roads Decentralization Project). The approach for implementation support takes into account the borrower's past experience with the Bank's policies and procedures while adapting to the new elements and challenges of the new operations.

3. **Technical**. Due to the relatively high number of small contracts to be implemented in a decentralized manner, the challenges of inadequate capacity for supervision of the local governments (Subcomponent 1.1), and the innovative approach of logistics corridors (Subcomponent 1.2), Component 1 is expected to require significant supervision and implementation support from technical, procurement, FM, and safeguards compliance standpoints. In addition, Component 1 includes an ambitious and large program of rehabilitation of about 2,200 km of rural roads for a total amount of about US$407 million over a period of five years. It will include CREMA-type contracts which have not been used for rural roads, as well as a network approach to feeder roads and related production activities that are connected to the main logistics corridors. Component 2, on the periodic and routine maintenance program, is not expected to require more supervision than in previous operations. Component 3, however, includes critical institutional strengthening activities such as support to the PVD toward a monitoring, supervision, and policymaking agency from the current executing agency and deepening the decentralized management of roads assets by transferring knowledge, ownership, and accountability to the local governments and their technical arms, including the PRIs.

4. **Financial management**. The PVD has adequate experience with the Bank's FM requirements from the previous loans; however, the Bank will provide further FM training to the PVD's FM staff and will strengthen the supervision of the financial flows from central to local levels. The supervision will review the Project FM system, including but not limited to accounting, reporting, and internal controls.

5. **Procurement**. The PVD has adequate experience and skills regarding Bank procurement processes, as demonstrated by the good track record in previous loans. However, the procurement risk is rated Substantial due to the large number of contracts included in the Project. In addition to the standard ex ante and ex post procurement reviews, the implementation support strategy for procurement consists of ensuring that the procurement capacity for Project implementations is fully maintained. This includes early identification of quantitative and qualitative bottlenecks in the PVD's procurement department, capacity building, and, as necessary, consultants' support.

6. **Environmental and social safeguards**. The PVD's safeguards unit needs strengthening with additional staff. The organization has an environmental specialist but no social safeguards specialist. Although the preliminary findings show that the adverse social and environmental impacts of the Project are expected to be limited (if any), the PVD plans to introduce a culture of awareness for safeguards at the local level. The implementation support strategy consists of staffing the PVD with specialized environmental and social specialists and a head of unit, as well as strengthening the PVD's internal capacity with training and consultants' support.

Bank's Implementation Support Plan

7. Given that PATS includes cross-cutting teams related to social and environmental safeguards and gender, in addition to the substantial efforts needed on Components 1 and 3, the level of technical support needed for implementation is considered substantial on the technical side, substantial on the fiduciary side, and moderate on the environmental and social sides. The Bank team will conduct at least semiannual supervision missions, desk reviews, and field visits to follow up on Project implementation. Supervision will be carried out jointly with the IADB team. Detailed inputs from the Bank team are outlined below.

8. **Technical**. Experts in transport, roads civil works, gender, poverty impact assessment, environmental and social safeguards, and road safety on the Bank team will (a) conduct, based on known national and international best practices, the technical and institutional dialogue; (b) advise on the design of activities envisaged in their respective subcomponents, including in the preparation of TOR, budget, and procurement processes of specific studies to support the technical assistance; (c) participate in Project supervision and field visits to advance the dialogue with the client and review progress; and (d) engage with the client to enable knowledge transfer and guidance.

9. **Fiduciary**. FM and procurement specialists will conduct annual reviews of the Project fiduciary implementation, review reports, verify compliance with agreed fiduciary procedures, identify potential capacity gaps including staffing, and evaluate adequacy of documentation and record-keeping arrangements and systems. Training will be provided by the Bank's FM and procurement specialists, located in Lima, during preparation and will continue during Project execution.

10. **Environmental and social safeguards**. The environmental and social specialists on the task team will monitor and evaluate the implementation effectiveness of the agreed Environmental and Social Frameworks and other documents, as needed. The environmental and social supervision consultants will function as pertinent sources of information on the handling of social and environmental questions. Continuous support will be made available by the Bank team when identified or required by the client. During implementation, the Bank team will (a) supervise the implementation of the agreed Environmental and Social Frameworks and Plans, as triggered in the Project; (b) address concerns from the client or other stakeholders on safeguards policies; and (c) employ or cause to be employed environmental and social staff and/or consultants to support the PVD, as needed. Training to counterparts on the Bank's safeguard policies will also be fostered.

11. Table 4.1 summarizes the human resources and skill mix requirement for the implementation support.

Table 4.1. Human Resources and Skill Mix Requirement for Implementation Support

Skills Needed	Number of Staff Weeks	Number of Trips	Comments
Task team leader	12 in first year, then 10 per year	Three missions in the first year, then semiannual, field trips as required	Staff, Washington based
Support technical team (transport specialist, ETC and/or STC)	- Intern: 24 SW per year - Transport Specialist (road engineer): 12 SW/year	Regular support as needed, field trips as required	STC and staff, Country office based
Procurement specialist	4 in first year, then 3 per year	Semiannual mission	Staff, Country office based
FM specialist	3 in first year, then 2 per year	Semiannual mission	Staff, Country office based
Environmental specialists	5 in first year, then 4 per year	Annual mission, field visit as required	Staff/ETC, Country office based
Social specialist	5 in first year, then 4 per year	Annual mission, field visit as required	Staff, Washington based
Road safety specialists	8 in first year, then 4 per year	2 missions	International consultant
Gender specialist	1 in first year, then 0.5 per year	1 mission	Staff, Washington based
Impact evaluation specialist	2 in first year, then 1 per year	3 missions	Staff/ETC, Washington based

Note: ETC = Extended Term Consultant; STC = Short Term Consultant.

Annex 5: Expected Project Contribution to Reducing Extreme Poverty and Boosting Shared Prosperity

Country: Peru

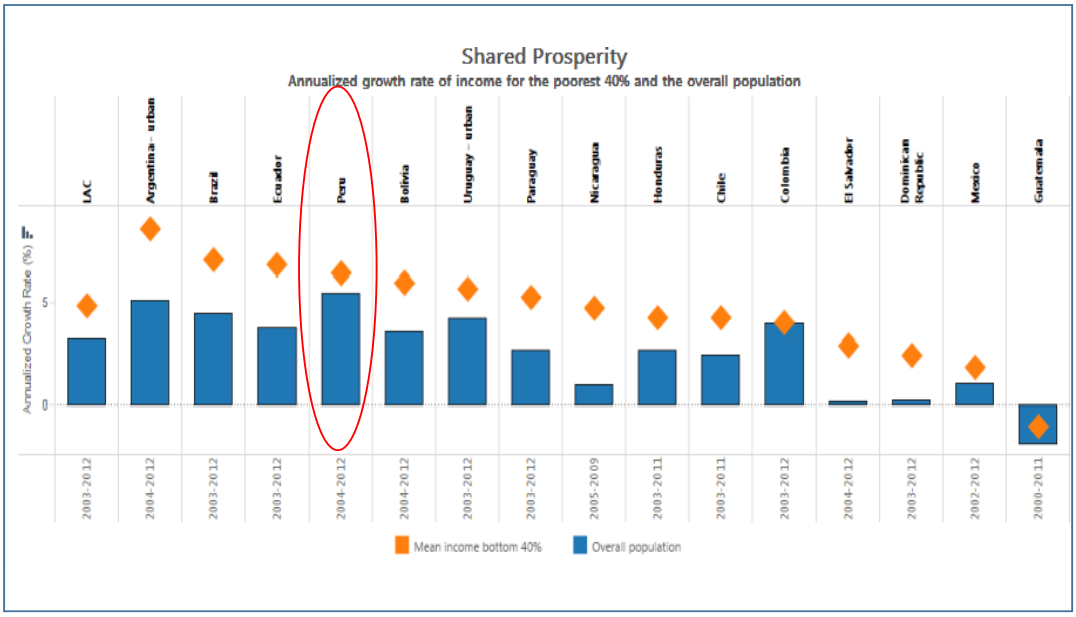
Support to the Subnational Transport Program Project (P132515)

1. This annex provides a summary of key socioeconomic and demographic aspects in Peru, presenting the latest data used by the National Institute of Statistics and Informatics (*Instituto Nacional de Estadística e Informática*) (INEI) to geographically identify the location of the poor and bottom 40 percent in the income distribution. Drawing on existing data obtained from the INEI and the PVD, this annex later describes critical mobility and accessibility constraints in selected Project areas. Drawing on expected results, some consultations and policy recommendations, the annex concludes by discussing how the poor and bottom 40 percent are likely to benefit from the proposed road maintenance and safety interventions.

Poverty and Shared Prosperity in Peru

2. In the past decade, Peru has displayed strong economic performance reaching high growth rates, low inflation, macroeconomic stability, and reduction of external debt. During the financial crisis of 2009, Peru's economy registered a modest growth, followed by a speedy recovery with rates between 5 percent and 8 percent during 2010–2014. Economic growth has been accompanied by a sustained decrease in the poverty rate. Between 2005 and 2014, the poverty headcount fell from 55.6 percent to 22.7 percent while extreme poverty fell from 15.8 percent to 4.3 percent. Similarly, the record in shared prosperity has been very positive, with income growth of the bottom 40 percent averaging 6.8 percent per year against 5.4 percent for the overall population in the 2004–2013 period (figure 5.1), while the Gini coefficient fell from 0.49 to 0.44, making Peru a top performer in the region.

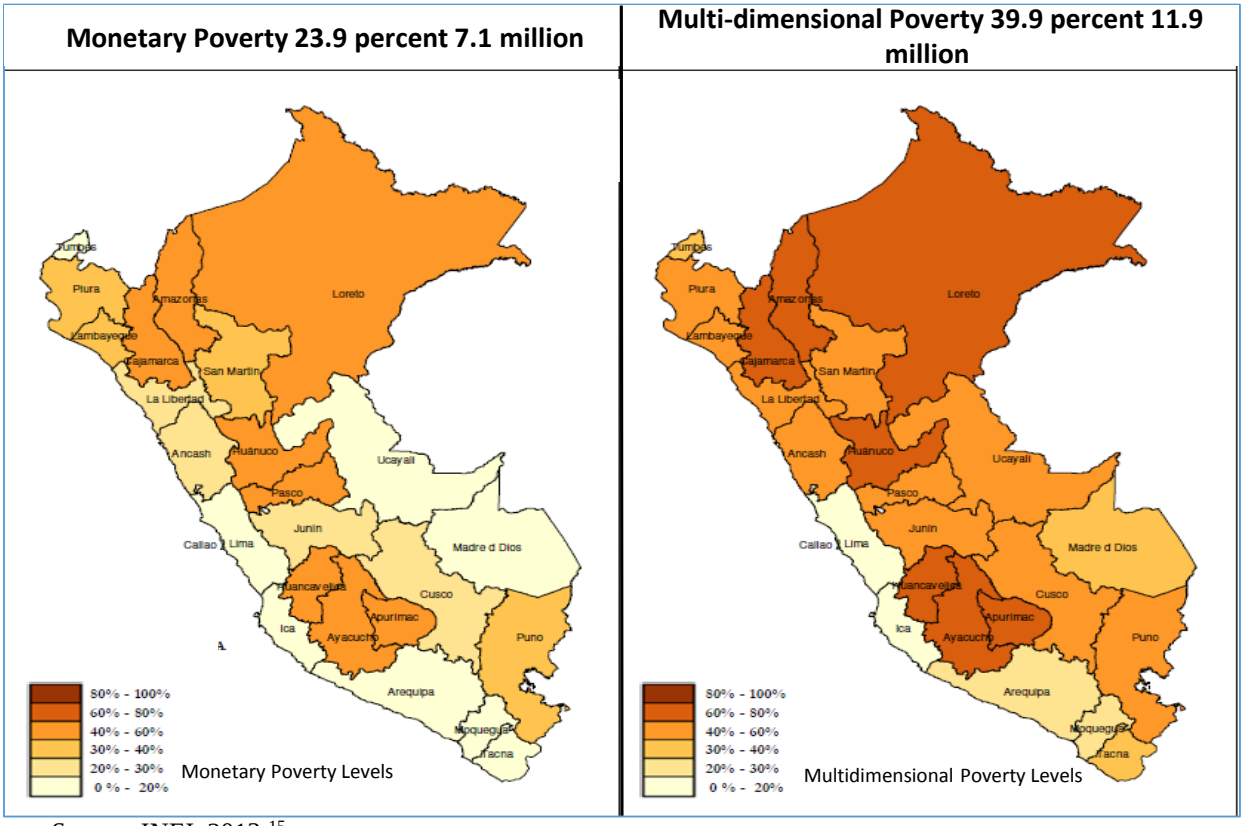
Figure 5.1. Evolution of Shared Prosperity in Selected Latin American Countries, Multiple Years



Source: World Bank, 2013

3. Notwithstanding these impressive achievements, there is significant variation between regions, with extreme poverty constituting an almost exclusively rural phenomenon concentrated in a few departments. Disparities across the country remain high, particularly between rural and urban areas. In 2014, while the poverty rate was only 15.3 percent in urban areas, it stood at 46 percent in rural areas. Peru substantially reduced the share of the population who were simultaneously multidimensionally and monetarily poor; however, poverty continued to be very high in some departments, particularly in the Sierra and Selva regions (figure 5.2). Information from poverty maps allows for the identification of districts in which a large concentration of the extreme poor reside. In 2012, almost half of the extreme poor were concentrated in approximately 8 percent of Peru's rural districts. A large number of these districts were located in the departments of Cajamarca, Piura, La Libertad, and Apurimac.

Figure 5.2. Monetary and Multidimensional Poverty Levels by Department, 2012



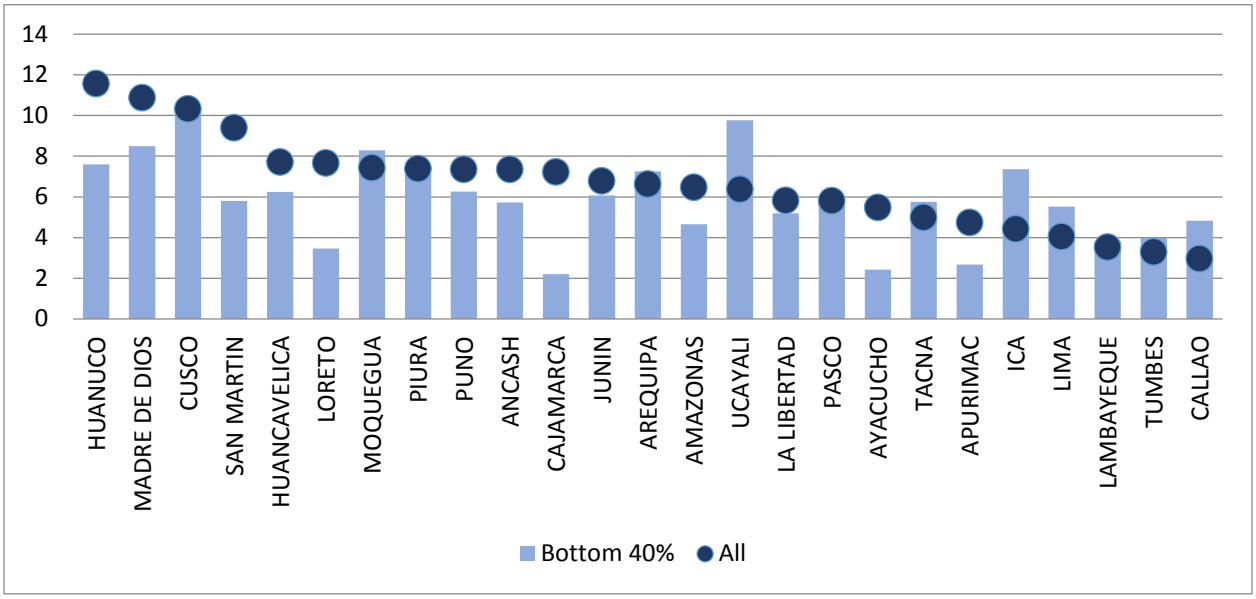
Source: INEI, 2013.[15]

4. In addition, although all of Peru's departments have had positive growth in the income of the bottom 40 percent in the last decade, there is considerable variation in the performance of the

[15] The monetary poverty line in Peru is defined as the monthly per capita expenditure level that determines whether a household meets its basic consumption needs. This value consists of two components: the food component which is called also extreme poverty line (that is, the value of food items in the representative consumer basket) and the non-food component. In 2009, the extreme and moderate poverty lines in the Lima Metropolitan Area were defined as per capita monthly consumption of less than S/. 160 and S/. 324, respectively. The multidimensional measure identifies as poor those individuals who are deprived at least in one out of seven dimensions dealing related to health, education, housing, and access to basic infrastructure.

bottom 40 percent within regions. For example, income growth for the bottom 40 percent of the population in Huancavelica and Huánuco, two of the poorest Peruvian departments in 2004, underperformed income growth for the departments as a whole. In contrast, the bottom 40 percent in Apurimac, another very poor department, showed much faster progress even though average incomes at the department level lagged behind the national average (figure 5.3).

Figure 5.3. Annualized Growth Rate (%) of Average Income by Department 2004–2012



Source: INEI, 2013

5. Transport constraints in rural areas in terms of access, mobility, and a poor record in road safety are some of the factors underlying the relatively high levels of poverty in the countryside and economic divergence compared to urban centers. The envisaged rehabilitation works in rural roads together with the integration of the feeder network to the logistical corridors directly support Peru's regional development and poverty reducing strategy. Road rehabilitation works will take place in 23 departments, targeting the districts with the highest poverty and vulnerability levels in the country. In this respect, almost 5 million inhabitants, most of whom belong to the lower two quintiles of the income distribution, will directly benefit from the Project. Before discussing some of the intended impacts of the Project, the next subsection briefly describes the main mobility and accessibility constraints observed in the Project area.

Mobility and Accessibility Constraints in the Project Area

6. The existing transport infrastructure deficiencies may be an important driver of the urban-rural divide in Peru. The road network in the country is still constrained in both coverage and quality and suffers from lack of maintenance. Road network constraints are considered one of the main reasons for unequal development of the different departments of the country and past studies demonstrate that there is an unequivocal correlation between the quality of road infrastructure of a region and the level of poverty of its population. For example, of 96,036 kilometers of rural roads, about 44 percent are classified as being in poor or very poor condition. The situation is aggravated by the country's intricate topography and climate events, which further strain the road

network. In the absence of well-maintained local roads, it is very difficult for low-income families to escape this condition.

7. Similarly, high logistics costs associated with transporting freight from the rural hinterland to the coast, where larger markets are located, not only reduce the country's competitiveness but constitute an implicit tax on the poor and smaller producers. For example, a study[16] concluded that the country's freight transport and logistics partially meet the needs of the production sector but severely limit the connectivity of smaller business, such as small- and medium-scale enterprises and producer cooperatives, curtailing the expansion of their market niches.

8. While rural poverty has multiple roots, one of them can be traced to logistical bottlenecks in the hinterland, inadequate transport services, and poor connectivity to markets, social services, and income-generating opportunities. The Global Competitiveness Report (2011–2012) World Ranking of 142 countries ranks Peru 105th in terms of the overall quality of its infrastructure, below many countries in Latin America and the Caribbean. According to the National Industry Development Association, infrastructure investment needs in Peru are in the order of US$13.9 billion, of which 50 percent corresponds to road infrastructure. The situation has likely worsened in recent years due to increased road traffic, exceeding the road network's capacity, and it is more critical in the Sierra and Selva regions, which contain some of the poorest districts. Indeed, transport and logistics costs of transferring output to and from some of the innermost corridors such as Tocache-Zarumilla, where poverty levels are largely above the national average, are the highest even though the travel time is one of the lowest among the logistics corridors. This unambiguously affects low-income consumers, on the one hand, who pay a disproportionate price for fresh produce and small-scale farmers, on the other, who see their profit streams highly reduced because of transport costs. Therefore, enhancing the quality of road infrastructure and improving the efficiency of transport and logistics services is not only a prerequisite for improving overall competitiveness but perhaps more importantly, for improving equity and promoting social inclusion.

9. Literature on poverty and transport confirms the importance of accessibility as a structuring element in the livelihoods of the poor. Transportation networks play a pivotal role in access to markets by connecting economic centers to economic activities and people to social services. High density and high-quality infrastructure can reduce transport costs, which in turn provide gains in trade. It is thus critical to invest in rehabilitation and capacity expansion, particularly in areas with low rural accessibility which tend to be the ones with relatively high poverty rates and inadequate connectivity to markets and services. The following section of this annex turns to some of the Project contribution to the twin goals of poverty reduction and boosting shared prosperity.

Expected Project Contribution to the Twin Goals

10. The importance of road infrastructure for the socioeconomic development of a region has been recognized for a long time. In many developing countries, aging or inadequate transportation networks are a binding constraint to economic growth. Many studies have shown that an extended and improved road network (that is, primary, secondary, and tertiary) can create opportunities for growth and development through multiple channels. Some of these include lowering the costs of

[16] *Diagnóstico de los Servicios Logísticos en el Perú* 2011.

transportation as well as the cost of consumption and production of goods and services, boosting farm output through encouraging greater access and use of modern inputs, and improving access to markets as well as lowering prices of agricultural inputs and outputs[17]. In the absence of asset management practices and an adequate road maintenance budget to preserve the condition of the existing network, a country's more lagged regions may be adversely affected; they may lose access to national and international markets, see a large reduction in the utilization and access to public and social services such as schools and hospitals on behalf of the population, and ultimately curtail the number of choices of livelihoods of vulnerable population groups.

11. The evidence on the relationship between poverty reduction and transport tends to examine the macro-level effects of road construction and expansion, with relatively sparse evidence on the household-level and village-level impacts. The anticipated welfare effects for the poor and bottom 40 percent are expected to be similar even if their overall impact will almost certainly be of lesser magnitude. Furthermore, the effects will be largely indirect. However, the Project is expected to result in several positive socioeconomic outcomes.

12. First, better road conditions can improve the ability of rural dwellers to diversify their employment options, affect firm location and cluster development, and increase income-generation opportunities. Second, adequate transport infrastructure and services are critical for households to access essential and better services in health/education. Third, cheaper transport expands the consumption/production possibility frontier of households and firms. Fourth, better mobility can facilitate social capital formation—enhancing social ties and community life. Fifth, well-maintained roads may stimulate the habitat in depressed areas and potentially transform the built environment of their surrounding regions as firms and households decide to relocate and new business and housing communities arise.

13. At the most direct level, PATS will create employment opportunities for activities related to road maintenance throughout the country, especially in labor-intensive activities. This will include not just management-level roles but lower skill roles such as laborers, gangers, plant operators, and administration assistants. The Project will provide opportunities in all regions of the country for sustainable sources of employment and income for the poor, especially in rural communities, where the prevalence of poverty is highest. The envisioned routine and periodic maintenance activities are also expected to generate multiplier effects in the local economies. Unlike short-term road construction projects, the maintenance programs that will be initiated by PATS under the microenterprise model are expected to provide long-term jobs for some of the poorest communities in the country, which are likely to last beyond the Project period and empower traditionally marginalized groups such as indigenous communities and low-income female-headed households.

14. Indirectly, PATS may, in the medium to longer term, improve other welfare indicators for the local population, becoming an important channel for achieving key developmental goals. Some of these indirect benefits impacts are already anticipated by the households and stakeholders consulted in the context of the socioeconomic study. The perceptions and opinions of participants of focus group discussions and household surveys show that maintenance of roads is expected to

[17] Khandker, Shahidur R, Bakht Zaid, Koolwal Gayatri B. 2009. "The Poverty Impact of Rural Roads: Evidence from Bangladesh," Economic Development and Cultural Change, University of Chicago Press, vol. 57(4).

positively affect social and economic indicators of these areas and overcome some of the major difficulties they face today in relation to transport infrastructure. Households, firms, and other stakeholders consulted strongly believe that continued road maintenance will bring benefits in terms of market accessibility, increased production volumes and productivity, reduced travel time and costs, reduction of production cost, and improvement of access to health services and education.

15. Some of the expected indirect impacts identified above are now presented and further elaborated for each of the Project components, together with how each responds to the Bank's corporate goals.

16. **Infrastructure for social inclusion**. This subcomponent seeks to improve infrastructure conditions exclusively in rural areas identified by FONIE, thereby reducing the existing infrastructure gap between the more isolated and poorer districts, principally in the Sierra and Selva regions, and the rest of the country. As mentioned in annex 2, the 570 districts which will be eligible for rehabilitation works will include strict poverty criteria (first and second lowest quintiles). PATS will improve social access conditions in 65 districts, thereby directly benefiting close to 400,000 rural dwellers. Besides the transport-related outcomes, it is expected that the intervened roads will bring jobs, markets, and services closer to the inhabitants of these districts.

17. Transport interventions, however, can only facilitate the acquisition of the assets needed for a sustainable livelihood[18]. A broad range of supply-side interventions are needed for low-income households and the bottom 40 percent to sustainably escape from poverty and vulnerability. In this respect, it is expected that in addition to infrastructure interventions, these districts also benefit from interventions in water and sanitation, rural electrification, and information and communication technologies, financed through FONIE (*Perfil de Proyecto*). As a complement and to reinforce the impact of the rural transport, local governments will execute a series of actions, projects, and programs under the umbrella of the LLDW as a means of creating income-generating opportunities in the Project area.

18. **Integration of the feeder network into selected logistic corridors.** As mentioned, existing logistical bottlenecks in the country unambiguously affect small-scale producers who see their market possibility frontiers reduced due to high transport costs and inefficient supply chains. The five logistics corridors intervened through PATS will help local agricultural production, cutting travel time to markets, ports, and airports. Such reductions should increase the movements of people and goods in the area, helping a greater number of residents sell their fresh produce in domestic and international markets, preventing wastage, and encouraging more frequent trips to sell perishable goods. Although it is premature to indicate that the Project will reduce the price of inputs on the one hand and raise farm-gate prices on the other, crop producers are likely to witness cost reductions due to (a) a decrease in transportation costs to bring produce to markets; (b) better transport and logistics in container and refrigeration trucks, which was less common before the road rehabilitation; and (c) improved access to labor in peak harvesting seasons.

[18] Booth, David, Hanmer, Lucia, and Lovell, Elizabeth. 2000. ¨Poverty and Transport¨. London: Overseas Development Institute

19. Given emerging trade opportunities and lower transport costs, farmers are likely to expand and diversify their consumer base. For instance, in similar contexts, evidence shows that the improvements of connectivity to and from the main centers of demand can draw traders from other districts and more remote settlements. In Peru, a significant proportion of the produce is still sold in local markets, particularly in the poorer districts, which prevents wastage and encourages more frequent trips to sell perishable goods. However, lower transaction costs and improvements in logistics are likely to encourage farmers to sell agricultural produce (particularly, onions, grapes, coffee, quinoa, and cocoa) outside of their immediate regions and further beyond to Lima and international markets.

20. **Rural road infrastructure maintenance.** Following the maintenance model introduced by the PVD, in which outsourcing and microentrepreneurship were promoted, the model ensures that all routine maintenance activities are fully managed and implemented by local governments and the PRIs and rural organizations (microenterprises) are formed by residents located in Project areas for the execution of routine maintenance activities.

21. Since 2003, the PVD has been making a gradual and progressive transfer of the routine maintenance of rural roads to local governments as part of the decentralization process. The aim of such a devolution initiative is to contribute to the economic development of rural low-income groups in the country by ensuring that the integrated departmental and local road network is in good condition and can be used throughout the year despite the weather. In 2007, the presence of the PVD was strengthened with the standardized model of the road management program funded by conditional transfers and executed by the provincial municipalities through the PRIs. Such a model was advanced to ensure the continuity of social programs and strengthen selected interventions designed to combat poverty and boost low-skill employment.

22. Apart from a positive impact on road conditions and cost-effective maintenance, evidence from Peru (see box 1) and elsewhere demonstrates that the microenterprise model has benefited low-income households and their communities. While not intended to work as a safety net for low-income and vulnerable groups, labor-intensive methods in road work can nonetheless provide a cost-effective, sustainable source of supplementary employment for the poor, especially in rural communities, where the prevalence of poverty is highest. The wage income that microenterprise members receive for their work can significantly improve their living standards and those of their families, with incomes generally being spent on better nutrition, education, household items, and housing. Indirect employment is mainly a result of local consumption by microenterprise members of their incomes, the hiring of local labor to attend to their agricultural fields, and the launching of additional productive activities and enterprises by the microenterprises or their members. Community-based microenterprises can also provide life skills to disadvantaged groups including single mothers, widowers, youth, and the landless poor, improving in the process, their entrepreneurial potential and employability in other sectors, and empowering them to undertake more influential roles within their communities. As such, this highly egalitarian model will ensure that inhabitants in Project areas have year-round access to income-generating opportunities, which will prevent them from falling into poverty in the event of covariate or idiosyncratic shocks.

Box 1. Impact of the Decentralized Rural Transport Project (*Programa Transporte Rural Descentralizado* [PTRD])

The PTRD was rated Highly Satisfactory in accomplishing its development objectives of (a) contributing to territorial development; (b) contributing to the fight against rural poverty; (c) improving access of rural households and entrepreneurs to goods, social services, and income-generating opportunities; and (d) reducing transport costs and improving rural transport infrastructure. The Impact Evaluation Study conducted in 2013 found that the rehabilitation, improvement, and maintenance of rural roads had the following main impacts relative to the counterfactual scenario: (a) a large impact in reducing extreme poverty, 13.8 percentage points if calculated through expenditures and an improvement of 7.5 when measuring poverty through the Degree of Unmet Basic Needs; (b) an increase in per capita expenditures; (c) a reduction in travel times to some reference points; (d) a large increase in school enrollments for girls and boys between 12 and 18 years of age, associated with decreases in travel times to schools; (e) an improvement in health accessibility; (f) a large decrease in travel times to consolidation centers, which led farmers to wider markets and therefore to command higher prices; and (g) a large increase in cultivated land

23. To examine some of the postulates and hypotheses above, the loan will finance an innovative assessment with a rigorous methodology to measure the impact of the feeder road investments, integrations with logistic corridors, and subnational road maintenance on key poverty and shared prosperity indicators in the Project subregions. The empirical exercise should isolate the causality links between the infrastructure investment and the variables of interest.

24. Using household-level and municipal data to be collected in three different periods during the Project life, the impact assessment will seek to respond to a series of questions related to Project beneficiaries such as:

(a) What is the impact of improved rural roads on different measures of poverty (monetary, unsatisfied basic needs, and so on.)?

(b) What is the impact of the interaction between improvement of rural roads and the LLDW?

(c) What is the impact of the program on road management of PGs?

(d) What is the impact of the new technology road improvement scheme in relation to the previous model?

On a general level, all questions will be disaggregated by gender and will seek to examine differentiated impacts on the bottom 40 percent and other vulnerable groups within the area of influence odf the Project. Similarly, the assessment will look at the project ‘softer’ aspects such as road safety, women’s empowerment through their participation in the microenterprises, environmental sustainability of the envisaged investments, and the efficacy of the contracting mode, among other micro-level questions.

Annex 6: Economic Evaluation

Country: Peru

Support to the Subnational Transport Program Project (P132515)

1. This annex summarizes the economic appraisal of the Project Component 1, Infrastructure for Integration and Social Inclusion, with its two subcomponents (Subcomponent 1.1: Infrastructure for Social Inclusion and Subcomponent 1.2: Integration of the Feeder Network into Selected Logistic Corridors*)*, and Component 2, Rural Road Infrastructure Maintenance, which account for 93 percent of the total Project investment and 90 percent of the Bank loan.

Infrastructure for Social Inclusion Subcomponent

2. The analysis for ubcomponent 1.1 used a producer surplus approach to calculate the benefits from the Project, given the specificity of the interventions focusing on a network characterized by a very low level of traffic (less than 30 vehicles per day in most cases) and the absence of alternative routes. The key benefit that is expected to accrue from these investments is an increase in total economic (primarily agricultural) production due to increased viability and productivity of the lands served by the roads. The study assessed 13 road sections of 335 km, which represent about 30 percent of the whole extension under this subcomponent.

3. In each section, the producer surplus resulting from the subcomponent's investments was calculated as the increase in the value of production net of production costs, resulting from the investments through deriving the characteristics of the main types of production within the area of influence. Assuming the similarity in socioeconomic characteristics of all other road sections under this subcomponent, the NPV at a 9 percent discount rate and the related IRR of the investments in this subcomponent over 10 years are estimated as S/. 66.2 million and 13.4 percent, respectively.

Integration of the Feeder Network into Selected Logistic Corridors Subcomponent

4. The economic analysis of Subcomponent 1.2 was conducted based on a conventional consumer surplus approach, which measures benefits accruing principally to existing road users in terms of reduction of vehicle operating costs and time cost for passengers and freight. The values of vehicle operating costs were based on the data provided by the MTC in Peru. In addition, the analysis also took into consideration changes in costs of road maintenance and rehabilitation works due to a different types of road surfaces. The analysis focused on 12 road sections of 339 km, which represent about 30 percent of the total extension under this subcomponent. The traffic volumes on these sections ranged from 40 to 480 vehicles per day.

5. The analysis estimated the stream of benefits to road users and savings on maintenance costs (as compared to a 'without Project' case) net of the costs of the proposed road works in each road section. Assuming the similarity in socioeconomic characteristics of all other road sections under the subcomponent, the NPV, at a 9 percent discount rate, and the related IRR of the investments in this subcomponent over 10 years are estimated as S/. 67.5 million and 17.4 percent, respectively.

Rural Road Infrastructure Maintenance Component

6. The economic analysis of Component 2 was conducted based on a conventional consumer surplus approach similar to Subcomponent 1.2. The analysis assessed roads of 2,800 km instead of the total extension of 5,000 km under this component because the remaining 2,200 km are the same sections under Component 1 and the benefits from these roads are already included in the economic analysis of Component 1 shown above. Over 10 years, the NPV, at a 9 percent discount rate, and the related IRR of the investments in this component are estimated as S/. 28.9 million and 17.8 percent, respectively.

Conclusion

7. Based on the above, the result of the analysis for the entire operation demonstrates that over 10 years, the NPV at a 9 percent discount rate and the related IRR of the investments in the program are estimated as S/. 271.4 million and 16.1 percent, respectively. The breakdown of each subcomponent is shown in table 6.1. Note that the total NPV is slightly higher than the sum of individual NPVs because a saving in the management costs is expected by implementing these subcomponents at the same time.

Table 6.1. Breakdown of the Economic Analysis for Each Component/Subcomponent

	NPV at 9% (S/., millions)	**Economic IRR (%)**
Subcomponent 1.1	66.2	13.4
Subcomponent 1.2	167.5	17.4
Component 2	28.9	17.8
TOTAL	**271.4**	**16.1**

8. A sensitivity analysis shows that PATS remains economically feasible with a 10 percent increase in roadwork costs or 10 percent decrease in benefits. Meanwhile, the economic return is slightly negative in the case of a simultaneous 10 percent increase in roadwork costs and 10 percent decrease in benefits. Accordingly, a variation in the work costs and benefits (such as traffic volume) will be closely monitored during the implementation so that the economic feasibility is ensured for all the road sections.

Table 6.2. Sensitivity Analysis

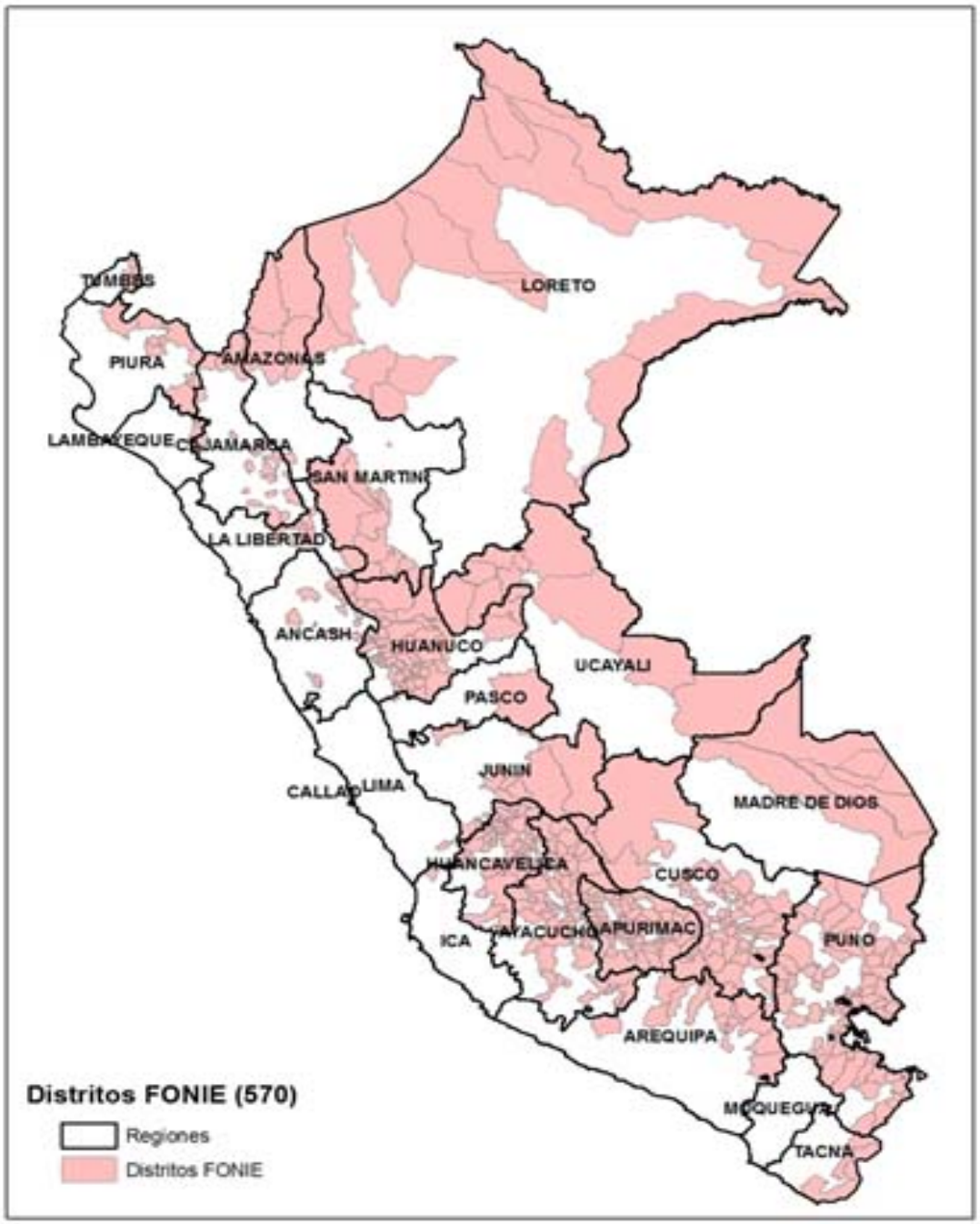
	NPV at 9% (S/., millions)	**Economic IRR (%)**
Base case	271.4	16.1
Increase in roadwork costs by 10%	142.9	12.4
Decrease in benefits by 10%	116.9	12.1
Increase in roadwork costs by 10% and decrease in benefits by 10%	-11.6	8.7

Annex 7: Maps

Country: Peru

Support to the Subnational Transport Program Project (P132515)

Map 1. Roads under Component 1.2 (Prioritized Districts under FONIE)



Source: FONIE

Map 2. Prioritized Roads under Component 1.2

Source: PVD