

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

Report No.: 52022

<b>Project Name</b>	Safe and Sustainable Transport Project
<b>Region</b>	LATIN AMERICA AND CARIBBEAN
<b>Sector</b>	Roads and highways (80%); General transportation sector (20%)
<b>Project ID</b>	P116929
<b>Borrower(s)</b>	GOVERNMENT OF PERU
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<b>Environment Category</b>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> FI <input type="checkbox"/> TBD (to be determined)
<b>Date PID Prepared</b>	December 2, 2009
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<b>Date of Board Approval</b>	January 14, 2010

## 1. Country and Sector Background

**Despite recent improvement, Peru's relative competitiveness remains hampered by the poor quality of its transport infrastructure.** Peruvian firms rank the poor quality of transport conditions as one of the most limiting factors to business growth. Because of it, firms need to have high inventories, to account for contingencies. High inventories generate financial costs which in turns increase unit costs, lowering competitiveness and productivity. About 80 percent of the firms surveyed by the World Bank Logistics Performance Index (LPI) initiative reported they believed the quality of the transport infrastructure in Peru was low or very low. As a result, with about 32 percent of product value, Peru's logistic costs are among the highest in Latin America, far greater than the OECD average of 9 percent. With 450 km of paved roads per million inhabitants and only 11 percent of paved roads out of a total network of 127,320 km, Peru is one of the last countries in the region with regard to its transport infrastructure stock. In comparison, the density of paved roads achieves 1,713 km per million people in Argentina and 934 km in Chile. According to the latest road inventory assessment done in 2005, only 39 percent of the Peruvian national roads are in good condition and at least 42 percent are in poor or very poor conditions. In Argentina, through an aggressive road asset management program, the National Road Agency has increased the proportion of national roads in good condition to 91 percent over a 20 year period.

**Road safety conditions are among the worst in the region, with road crashes having a substantial economic cost.** With official reports indicating an annual 3,510 deaths and 49,857

injured, Peru ranks poorly with regards to road safety. When accounting for Peru's low motorization rate, Peru has 42 deaths per 10,000 vehicles (the worst record in the region), compared to 12 for Colombia, 9 for Costa Rica, 8 for Chile, whose motorization rates are more than double that of Peru. The fatality rate per 100,000 habitants is equally worrisome, at 21.6; Peru is second to Venezuela (21.8), while Costa Rica (15.4), Chile (13.7) and Colombia (11.7) fare relatively better. A rough estimate of the economic cost of road crashes in Peru is about 1.5 percent of GDP. Driver behavior accounts for over 50 percent of road crashes, and is attributed to speeding, recklessness and inebriety. Studies also indicate that a lack of effective regulation of the vehicle fleet, particularly public transport vehicles, is also a major contributing factor, as well as deteriorated or poorly designed transport infrastructure. According to a recent road safety assessment performed by iRAP and financed by the World Bank through the Global Road Safety Facility on about 3,000 km of Peruvian roads, about 22 percent of these roads can be considered highly dangerous for car users and 63 percent of them for pedestrians. While road safety has been identified as a problem for many years, the Ministry of Transport and Communications (MTC) has only recently placed a high priority on this issue, with the reactivation of the National Road Safety Council and the endorsement of a comprehensive National Road Safety Plan. This plan has set an objective of reducing crashes by 30 percent over the 5-year period 2007 – 2011. However, its successful implementation will require solving still unaddressed bottlenecks such as the lack of an effective lead agency that can set policy and direct implementation to oversee the achievement of results, the absence of a culture of safe road design and usage, and the lack of a results-focused approach.

**In the context of the global economic downturn, Peru's stimulus package is placing a high priority on improving the country's transport infrastructure, with a particular focus on a few selected "mega-projects".** Although Peru is less affected by the global economic crisis than other countries in Latin America, the growth forecast for 2009 has been reduced from 6 to 2.5 percent. There are signs that the Peruvian economy has hit bottom is recovering slowly in the second semester of 2009 so that economic growth could reach about 4.0 percent in 2010. To mitigate the risks of any further deterioration of its economic performance and support growth recovery, the Government has prepared a countercyclical stimulus package ("*Plan de Estimulo Económico*") of about US\$3 billion for the years 2009-2010. Peru's stimulus package has earmarked two thirds of the resources for the infrastructure sectors, with an objective to double capital expenditures, compared to 2005. The Government's response takes into account the lessons from the last macroeconomic crisis faced by Peru at the end of the 1990s when infrastructure spending were severely downsized as part of the country's fiscal adjustment policies, resulting in a future loss of competitiveness and growth.<sup>1</sup> Public investment in transport in Peru only amounted to 0.09 percent of GDP in 2001-6, far behind competitors in the region. Private expenditures – although higher than in neighbor countries, were not sufficient to fill the gap. The level of public investment in transport has increased since 2007. The stimulus package will continue this trend by giving particular attention to a few selected "mega projects". These include in particular the completion of the *IIRSA Sur* road, the concession of six regional ports, the concession of the *IIRSA Centro* road, the concession of six regional airports and the construction of the infrastructure needed for the *Tren Electrico*, a new Lima urban transport system. Some of these projects are sufficiently attractive so that private financing could be leveraged through Public-Private Partnership (PPP) arrangements, despite the current difficulties

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<sup>1</sup> Source: Calderon, Easterly and Serven (2003).

to access financial markets. However, several of the prioritized projects do not have a clear financial profitability and the bulk of the financing is therefore expected to ultimately come from public sources. Past experiences have illustrated that contingent liabilities from the initial contracting arrangements of “mega-projects” may often be underestimated. If this issue is not properly addressed, it could create a growing financing need in the transport sector and a tension for the budget of the Ministry of Transport and Communications (MTC).

**In order to have the greatest impact on the performance of the transport sector, the stimulus package must also improve the situation of road asset management and road safety.** If the financing need created by the “mega-projects” is not properly addressed, less politically visible – though essential, investments such as road rehabilitation and maintenance, may end up being downsized to give the fiscal space needed. Only a few road rehabilitation investments have so far been prioritized as part of the stimulus package and the financing of road asset management expenditures (rehabilitation and maintenance) is therefore not fully ensured. Road maintenance is particularly critical in order to avoid a deterioration of road assets. It also has the highest economic returns of all the various types of road works. Between 1992 and 2005, it has been estimated that the lack of maintenance has caused the rapid deterioration of 1,357 km of national roads, generating a loss of US\$718 million for the GoP.<sup>2</sup> Road maintenance is also the most labor-intensive of all infrastructure investments. A recent World Bank study<sup>3</sup> has estimated that, albeit limited in scope, routine maintenance works can generate up to 500 jobs per US\$ million invested and can act as a safety net mechanism for the rural poor, through the use of specialized microenterprises.

**The capacity of the Ministry of Transport and Communications, as well as several transport regulatory instruments, need to be strengthened so that the stimulus package can be effectively implemented.** The stimulus package is likely to result in a dramatic increase of investments to be managed by the MTC. *Provias Nacional*, the agency in charge of the national road network within the Ministry, has seen a doubling of its budget in 2009 compared to the previous year, and a quadrupling since 2005. *Provias Nacional* has also been asked to rescue two faltering “mega projects” (“*IIRSA Sur*” corridor and Lima’s “*Tren Electrico*”). Nevertheless, *Provias Nacional* is one of the most efficient institutions in the Peruvian administration and, therefore, the counterpart entity, but also the construction sector which has been hit by the economic downturn, is ready to move forward with a larger volume of investments expected for 2010. However, the increase in works’ volume and the increasing focus on “mega projects” driven by the Government’s stimulus package, may progressively jam the absorptive capacity *Provias Nacional* and affect its capacity to implement important reforms in the transport sector, such as the design of safer road standards, or the implementation of sound road asset management activities. In addition, while *Provias Nacional* is already a high-performing institution, other areas of MTC that are relevant for the implementation of the stimulus package (eg. planning, transport regulation, concessions, safeguards’ unit) are suffering from serious institutional shortfalls and lack of resources. Maximizing the benefits of the stimulus package therefore requires an extensive and comprehensive institutional strengthening program not only of *Provias Nacional* but also of these other areas of the Ministry. In order to accelerate

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<sup>2</sup> Source: Instituto Peruano de Economía (IPE).

<sup>3</sup> Tuck, L., Schwartz, J. and Andres, L. (2009) – *Crisis in LAC: Infrastructure Investment and the Potential for Employment Generation*.

investments, the Government is also revisiting and optimizing many of its internal processes. As a consequence, many of the internal mechanisms regulating the Peruvian public expenditures (such as the *Sistema Nacional de Inversión Pública*) have lost some of their influence. While a deep reengineering of the highly bureaucratic Peruvian spending processes is needed so that the stimulus package can quickly produce all its expected benefits, key mechanisms that ensure the quality of public expenditures – such as proper planning and information systems – also need to be protected and even strengthened in order to improve the effectiveness of the Government’s response.

## **2. Objectives**

The proposed project development objective is to improve passenger and freight transport conditions in an efficient and safe manner along national road corridors that are essential to Peru’s competitiveness, in particular those included in the Government’s stimulus package in response to the global crisis. Specific objectives include: (i) improving the quality of selected national roads, through a scaling up of rehabilitation and effective maintenance, as well as the use of low-cost paving technologies; (ii) generating employment opportunities, particularly for the rural poor; (iii) supporting the reduction of road traffic fatalities and injuries (and resulting economic losses), on selected national roads, through the development of “safe corridors” and the implementation of an investment program prioritized through the application of the iRAP road safety assessment methodology; and (iv) strengthening MTC’s institutional framework with a view to improve the effectiveness of the Government’s stimulus package.

The project is aligned with the Bank Strategy in Peru to the extent the proposed operation would support Cluster 2 (“Sustaining growth and widening its base”) of Pillar 1 (“Economic Growth”) of the World Bank Group Country Partnership Strategy (CPS) for Peru, discussed by the Executive Directors on December 19, 2006. These objectives would be achieved through enhancing the effectiveness of infrastructure investments in transport and by generating employment opportunities for the poor, through the road maintenance activities. The CPS progress report for FY07-09 has highlighted “weak planning, design and implementation capacities” as a major bottleneck for the performance of the infrastructure sectors. This issue is particularly important for a successful implementation of the Government’s stimulus package. To address this critical need, the proposed project includes extensive institutional strengthening activities, gathered under its fourth component.

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

The Peruvian Ministry of Economy and Finance (MEF) has requested Bank assistance in order to improve the design of the Government’s stimulus package and help finance its implementation. In the road sector, a US\$900 million financing gap has been identified by MEF to be financed from external resources.<sup>4</sup> While other financing institutions (eg. *Corporación Andina de Fomento* - CAF) are focusing their efforts on the financing of the Government’s “mega

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<sup>4</sup> MEF initially requested US\$300 million to each of the three multilateral institutions active in transport in Peru (CAF, IADB and the World Bank). On Dec. 23, 2008, CAF approved US\$300 million additional to help finance the additional costs of the *IIRSA Sur* project. MEF finally requested US\$150 million to the World Bank and US\$150 million to the IADB.

projects”, the World Bank and the IaDB have explored, together with the MEF and the MTC, an investment and technical assistance package that would secure and scale up road asset management activities (in particular road maintenance), bring innovative practices (low-cost paving technologies, output performance-based contracts), initiate a road safety program and address institutional shortfalls so that the stimulus package can be implemented rapidly while bringing all its expected benefits. The MTC is particularly interested in the international best practice the two banks could bring to the design of the program. The World Bank has proposed to use its experience on the following three issues to bring added-value in the design of this operation:

- (a) *Road Safety*. The Bank has financed a stand-alone road safety project in Vietnam and is working with other countries to provide guidance on the implementation of road safety policies. Two countries in LAC have taken the lead in this area (Chile and Costa Rica). Through a seat-belt campaign, Costa Rica has for example increased compliance from 24 to 82 percent and reduced fatalities by 13 percent;
- (b) *Output performance-based contracts*. The Bank has financed a successful implementation of rehabilitation and maintenance (CREMA) contracts in Argentina and Brazil;
- (c) *Low-cost paving technologies*. Chile has been implementing a low-cost paving program to improve access on low-traffic roads in a cost-efficient way.

The Bank has been involved in the transport sector in Peru for several decades, mostly in the design and implementation of decentralized transport operations (Decentralized Rural Transport, Regional Transport Decentralization). The Peru Rural Roads Program, initiated in 1995, has been one of the most successful Bank operations in rural transport and it has become a reference which has been replicated by other countries in the region. This program has developed low-cost rehabilitation technologies (gravel roads) that proved highly sustainable when combined with a permanent efficient routine maintenance mechanisms (implemented by the micro-enterprises). The program also supported the decentralization of rural roads’ management at the provincial level. The last Bank-financed project targeting the national road network is the 1994 Transport Rehabilitation Project. However, through its policy dialogue, the Bank has kept providing the Government with technical assistance, particularly in the areas of concessions and PPPs.

In parallel to the proposed Safe and Sustainable Transport Project, the Bank is helping the Government in other areas that are relevant for the design and implementation of the stimulus package. One of these areas is PPP and the design of Peru’s infrastructure fund. The Bank has been associated in the design of Mexico and Colombia’s infrastructure funds and could facilitate twinning arrangements of these countries with Peru. The PPP agenda in Peru is mostly driven by *ProInversión*, although other institutions (MEF, MTC, OSITRAN) are also involved. The Bank has also financed the 2005 Peru Guarantee Facility, implemented by *ProInversión*. While this instrument has, so far, not been used by the Government, Bank guarantees could prove useful in the implementation of the Government’s PPP agenda, particularly for those “mega-projects” that have the greatest economic returns but may not be sufficiently attractive to the private sector. Bank intervention in this area would also depend on the operational and safeguards procedures applied to these investments. The Bank is also exploring further support with subnationals (in particular at the regional level) and for the development of decentralized infrastructure. Rural

and regional roads, as well as other infrastructures, are particularly important to address Peru's high rates of rural poverty. However, institutional weaknesses have so far reduced the capacity of subnational governments to respond to the demand for increased access to infrastructure services. The Bank is tackling these issues through its policy dialogue but also through various operations (IFC's Peru Subnational Guarantee Facility, Vilcanota Valley Rehabilitation and Management Project, Sierra Rural Development Project, Decentralized Rural Transport, Regional Transport Decentralization Project, Rural Electrification Project).

#### 4. Description

The proposed project includes the following five components:

**Component 1: Road rehabilitation and upgrading and CREMA pilot (estimated cost: US\$ 177.4 million of which US\$ 103.3 million would be financed by the Bank).** This component will contribute to the financing of MTC's 2010 road rehabilitation and upgrading program and help accelerate these investments as part of Peru's stimulus package. More specifically, this program aims at contributing to the financing or rehabilitation and upgrading works for four national road segments, totaling 183.3 km. Design studies and safeguards instruments have been completed for the four identified road works. Depending on the availability of budget resources, other road works might be added or substituted to this initial list of contracts, provided they comply with MTC's road rehabilitation and upgrading program's eligibility criteria and they are implemented in compliance with Bank safeguards and fiduciary policies. MTC's road rehabilitation and upgrading program for 2010 aims at rehabilitating eight national road corridors, totaling sixteen road sections and representing 1,024 km. Six of these corridors have been flagged as priorities in Peru's stimulus package (D.U. No. 010-2009) and the remaining two had been prioritized prior to the design of the package. On at least one of the road sections financed under this component, a CREMA approach will be piloted by *Provias Nacional*. CREMAs are long-term, performance based rehabilitation and maintenance contracts that have been successfully experimented by several countries (eg. Argentina and Brazil in LAC). Associated with adequate contract supervision mechanisms, they allow transferring in a cost-effective way some of the technical risks to the private sector. Finally, this component will finance a Strategic Environmental Evaluation, in order to evaluate, in the first year of operation, the expected environmental impact of the whole package of road works to be implemented under the proposed component. A dated covenant has been introduced in the Loan Agreement to make sure that the completion of this evaluation is done at the end of CY10.

**Component 2: Road maintenance (estimated cost: US\$ 264.1 million of which US\$ 35.0 million would be financed by the Bank loan).** This component will contribute to the financing of MTC's outsourced and performance-based maintenance program, by contributing to financing (a) periodic maintenance contracts on selected national roads; and (b) periodic maintenance activities included in mid-term, performance-based, maintenance contracts on selected national paved or unpaved roads. Envisaged activities include 10 periodic maintenance and performance-based maintenance on 7.9 percent of the total national network. The 2010 program aims at financing the maintenance of 2,096 km of national roads, including 712 km identified to receive a periodic maintenance and 1,384 km under a performance-based maintenance contract. This program is part of the new strategy of *Provias Nacional* to move away from force-account

practices, transfer maintenance activities to the private sector (including emergency maintenance) with performance-based contracting arrangements, implementing low-cost paving technologies for low-traffic national roads (*Proyecto Peru*), and better ensuring the sustainability of road investments by securing maintenance in the mid-term (5 years). The program includes 2 different categories of maintenance contracts: (i) periodic maintenance contracts (sub-component 2.1.); (ii) performance-based maintenance contracts on paved roads, as well as on unpaved ones under the modality of *Proyecto Peru* (sub-component 2.2.). Execution estimates for CY10 amount to US\$76.25 million, half of which would be eligible to Bank financing, for up to US\$35.0 million. The latest initial budget figures for CY10 for this program, as agreed between MEF and MTC, include PEN305 million (US\$102 million) but this amount still needs to be approved by the Peruvian Congress. Some budget adjustments could also be made by the MEF during CY10, depending on budget execution progress. This component is also expected to generate significant employment opportunities due to the labor-intensiveness of routine maintenance activities. Job creation will be monitored during implementation.

**Component 3: Road safety infrastructure (estimated cost: US\$ 20 million of which US\$ 10 million would be financed by the Bank loan).** This component will finance road works to improve the road safety condition of selected national roads. The MTC is planning to label some of these roads “safe corridors”. The “safe corridor” concept goes beyond the improvement of the sole infrastructure and it implies working with other agencies and ministries in order to articulate a combination on road safety improvements (safer infrastructure but also more stringent enforcement, road safety education initiatives and more efficient emergency mechanisms) that could increase the impact to reduce road crashes. The proposed component would in particular help finance the recommendations that came out of an iRAP assessment which has been completed, with support from the Global Road Safety Facility, on 3,000 km of Peruvian roads. Some of the corresponding investments could also be included under an existing rehabilitation and maintenance contract under component 1 or 2, or outside of the scope of the proposed project. The actual implementation of the iRAP recommendations will be monitored, as one of the project’s performance indicators and a legal covenant will help restrict the reallocation of loan resources for this component unless sufficient progress has been made in this area. Other works eligible under the proposed component include the improvement of bridges and critical points that also contribute to the country’s poor performance in terms of road safety. A preliminary bridge assessment has been performed by *Provias Nacional* and will help prioritize among possible eligible works.

**Component 4: Institutional support and transport regulation (estimated cost: US\$ 3.3 million of which US\$ 1.6 million would be financed by the Bank loan).** This component will finance a comprehensive technical assistance and institutional strengthening package for *Provias Nacional* (subcomponent 4.1) and other areas of the MTC (subcomponent 4.2). The objective is to improve the institutional performance of these agencies so that they can be the most efficient and effective in implementing the Government’s stimulus package. While *Provias Nacional*’s capacity currently seems sufficient in order to implement the projected pipeline of road investments, fewer resources become available for innovation and strategic initiatives. The proposed component therefore focuses on these specific needs. In case *Provias Nacional*’s capacity would be jammed during implementation, due to the additional activities generated by Peru’s stimulus package, a reallocation of project resources would be performed to assign more

resources to this component. The eligible activities, to improve capacity for management, monitoring and evaluation, are grouped under three overall themes: (a) improvement of information management systems (such as, road and bridge asset management, emergency and incident management, contracts management); (b) improvement of road safety management and transport regulation systems; and (c) capacity building for improved management of environmental and social safeguards. Subcomponent 4.1. will be implemented by *Provias Nacional*. Subcomponent 4.2, is to be implemented by MTC's Office of General Administration of (OGA in Spanish). MTC entities to be supported as part of this sub-component would include: the General Unit for Planning and Budget (OGPP in Spanish) and the General Directorate for Social and Environmental Safeguards (DGASA in Spanish). Regarding road safety activities, the Vice-Minister of Transport is the President of the National Road Safety Council (CNSV in Spanish) and his office will be leading the national road safety agenda. Implementing the National Road Safety Strategy requires a strong road safety agency that is still missing today although some early progresses have been signaled within the CNSV. The proposed component would finance services like an extension of the iRAP assessment, the constitution of a road crashes database, as well as additional studies and consultancies linked to the monitoring and institutional strengthening of *Provias Nacional's* road safety program. The Bank, through its policy dialogue with the MTC, will continue to give technical assistance to help build up a lead agency that could effectively implement Peru's road safety strategy. For example, a workshop was co-organized by the World Bank and the Vice-Minister of Transport on September 22-23, 2009 in order to advance on those issues.

**Component 5: external auditing (estimated cost: US\$0.2 million of which US\$ 0.1 million would be financed by the Bank loan).** This component will finance the project's external audit.

## 5. Financing

Source:	(\$m.)
BORROWER	184
INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT	150
INTER-AMERICAN DEVELOPMENT BANK	150
Total	484

## 6. Implementation

The proposed project will be implemented by two separate entities of the Ministry of Transport and Communications:

- (a) **Provias Nacional** will implement components 1, 2, 3 and sub-component 4.1. *Provias Nacional* is, within MTC, the agency in charge of managing the national road network. The proposed project will finance three investment programs which fall under *Provias Nacional's* responsibilities (rehabilitation of national roads, outsourced maintenance on non-concessioned national roads and road safety improvement works), as well as specific institutional strengthening and technical assistance activities related to the sound asset management of national roads. *Provias* is a highly experienced agency with a satisfactory

track record both in terms of working with multilateral organizations (IaDB, CAF, WB) and in terms of budget execution.

- (b) **MTC's Office of General Administration (OGA)** will implement component 4.2. The OGA is a small unit which is in charge of handling fiduciary activities (eg. procurement of goods and consultancies) for other entities of MTC. These other entities include MTC's General Unit for Budget and Planning (OGPP in Spanish), the General Directorate for Social and Environmental Safeguards (DGASA in Spanish) and the office of the Vice-Minister of Transport.

All infrastructure improvements will be implemented by *Provias Nacional*. Other technical assistance activities will be procured by OGA and will benefit other areas of the Ministry. For example, the development of the crash data collection and analysis system will be procured by OGA but handled by OGPP, in close coordination with CNSV.

All activities to be financed under the proposed project will be included in the MTC's budget and will have to follow existing procedures in vigor in Peru to control the quality of public expenditures. A particularly important step is the validation of individual road improvement investments by the National Public Investment System (SNIP in Spanish) of the Ministry of Economy and Finance (MEF). All of the identified works to be initiated in 2010 as part of component 1 have already been cleared by the SNIP. Component 2's activities (road maintenance) are considered current expenditures and do not have to be cleared by SNIP.

## **7. Sustainability**

The proposed project aims at improving the sustainability of transport investments in Peru through the scaling up of sound existing road maintenance practices (eg. five-year upgrading and maintenance contracts implemented under *Proyecto Peru*) and the piloting of innovative long-term, performance-based maintenance contracts (CREMA). A Peruvian think tank (IPE) estimated that between 1992 and 2005, the lack of maintenance accelerated the deterioration of 1,357 km of national roads, resulting in a US\$718 million accumulated loss for the GoP. The proposed project will increase the quality and the sustainability of public investment in transport and raise the proportion of national roads that receive permanent and efficient maintenance from 32 to 89 percent. These maintenance practices will continue beyond the project's closing date since the contracting period of most of the maintenance contracts (5 to 10 years) will exceed the project's duration. Finally, by moving into longer-term maintenance contracts and demonstrating their benefits on the roads' life cycle, the project is also expected to build and reinforce an "asset management culture" within MTC which should promote a greater sustainability for road investments. The institutional strengthening package designed under Component 4 will also contribute to develop greater capacity for sound road asset management. In order to gain in efficiency, *Provias Nacional's* strategy for road maintenance is moving toward longer-term maintenance contracts (CREMA, *Proyecto Peru*) and progressively phasing out force account practices.

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

The design of the proposed project builds on the following lessons from other initiatives in Peru or other countries:

- a) **Keeping infrastructure and services ready to run should be a priority in times of economic downturn.** A review by the Bank of the stimulus packages of seven middle-income countries highlighted that the proposed infrastructure spending – of which transport took the largest share - represented on average 64 percent of a total of US\$157 billion. While the global demand for transport services has been falling as a result of the downturn, priority should be put on keeping transport infrastructure and service ready to run. In this context, the Bank strategy is to work with its client countries in order to maintain a full operational status of all assets to avoid any delay in recovery when growth resumes. This requires in particular maintaining transport infrastructure throughout the crisis as a matter of priority.<sup>5</sup>
- b) **Long-term, performance-based maintenance contracts, such as the CREMA approach, can produce significant efficiency gains for road asset management.** Using CREMA contracts, Argentina's National Road Agency has reduced its maintenance backlog from 35 to 9 percent over a 20-year period. Brazil has introduced the CREMA model in the early 2000s and it has progressively been extended to one third of the federal network and more than 10 percent of the states' networks. An ex-post evaluation,<sup>6</sup> comparing objectively output performance based contracts to the traditional input-measurements approach, has shown that these contracts brought an overall improved efficiency to the road sector which translated to better road conditions at lower costs for the governments and a reduced management burden on the road administrations;
- c) **Low-cost paving technologies are cost-effective solutions for low-transit roads.** Chile has been implementing a low-cost paving program (*Programa de Caminos Básicos*) to improve access on low-traffic roads without jeopardizing the cost-efficiency of such investments. Various technological alternatives have been developed, depending on the climate conditions and the availability of local materials (eg. by-products from the mining industry). The use of the alternative technologies has been highly successful but some technologies have been performing better in certain climatic conditions and may therefore not be replicated country-wide.
- d) **Strong political commitment, robust institutional settings and effective pilot programs are key ingredients for the success of a road safety policy.** International and regional experience highlights that, in order to be successful, road safety programs require a strong lead agency, capable of overcoming the coordination challenges triggered by the multidisciplinary nature of road safety issues and accountable for delivering results. Sweden with its vision zero approach has emerged as a consistent leader in road safety. Other European countries implemented programs to enhance enforcement and enabled a reduction in fatalities. While still relatively new, the Province

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<sup>5</sup> Saghir, J. – *Transport: Invisible Force – Visible Impacts*; Presentation at the 2009 Transport Week.

<sup>6</sup> Meyer, A., Lancelot, E. - *Output performance based contracts in the road sector: Towards improved efficiency in the management of maintenance and rehabilitation - Brazil's experience.*

of Cordoba in Argentina introduced a highway safety patrol, and witnessed a reduction in fatalities by 40 percent within its first few months of operation.

## 9. Safeguard Policies

**The proposed Project triggers five Bank safeguards: Environmental Assessment, Natural Habitats, Physical Cultural Resources, Involuntary Resettlement and Indigenous Peoples.**

An Environmental Assessment Report, a Resettlement Plan and, when applicable, an Indigenous Peoples Plan have been prepared for each of the four road rehabilitation and upgrading works identified at the time of appraisal. In addition, an Environmental and Social Management Framework, a Resettlement Framework and an Indigenous Peoples Framework have been prepared and would be applied to any other road improvement or maintenance works to be financed by the proposed project. Finally, a preliminary Environmental Assessment was also prepared for a sample of MTC's road rehabilitation and upgrading program scheduled for CY10. All documents have been reviewed by Bank specialists and their comments have been integrated. All documents have been disclosed prior to appraisal in country by Government agencies and in the Bank's Infoshop.

<b>Safeguard Policies Triggered by the Project</b>	Yes	No
<a href="#">Environmental Assessment (OP/BP 4.01)</a>	[X]	[ ]
Natural Habitats ( <a href="#">OP/BP 4.04</a> )	[X]	[ ]
Pest Management ( <a href="#">OP 4.09</a> )	[ ]	[X]
Physical Cultural Resources ( <a href="#">OP/BP 4.11</a> )	[X]	[ ]
Involuntary Resettlement ( <a href="#">OP/BP 4.12</a> )	[X]	[ ]
Indigenous Peoples ( <a href="#">OP/BP 4.10</a> )	[X]	[ ]
Forests ( <a href="#">OP/BP 4.36</a> )	[ ]	[X]
Safety of Dams ( <a href="#">OP/BP 4.37</a> )	[ ]	[X]
Projects in Disputed Areas ( <a href="#">OP/BP 7.60</a> ) <sup>7</sup>	[ ]	[X]
Projects on International Waterways ( <a href="#">OP/BP 7.50</a> )	[ ]	[X]

*Environmental Assessment (OP/BP 4.01)* is triggered because some limited environmental impacts could appear, principally during project execution that would have to be prevented, mitigated and/or compensated. Environmental Assessments have been prepared for the four road rehabilitation and upgrading works pre-identified to be financed under component 1. In case additional works from MTC's road rehabilitation and upgrading program would also be financed by the proposed project, an Environmental and Social Management Framework has been prepared. An Environmental Assessment Report has also been prepared for a sample of works of MTC's road rehabilitation and upgrading program for CY10.

*Natural Habitats (OP/BP 4.04)* is preventively triggered because other road sections located in sensitive areas could become eligible under component 1. For these potential cases, the corresponding environmental studies would include the respective Environmental Management Plans in order to take into account the environmental and social considerations, as well as measures to prevent and/or to mitigate the potential negative impacts.

*Physical Cultural Resources (OP/BP 4.12)* is triggered because Peru has an extensive cultural, historical and archeological heritage and because some of the targeted road sections are located

<sup>7</sup> By supporting the proposed project, the Bank does not pretend to prejudice the final determination of the parties' claims on the disputed areas

in the indirect influence zone of archeological places. Although no significant adverse impact is expected on these archeological sites, these works have to follow the review and authorization process of the National Institute of Culture (INC). Additionally, “Chance Finds Procedures” have been included in the ESMF to take into account these cases.

*Involuntary Resettlement (OP/BP 4.12)* is triggered because, although civil works will mostly take place within the existing right of way, the project will affect partial areas of grasslands and also partially cultivated and non-cultivated plots. Works will also affect houses or small buildings for which in situ reconstruction or cash compensation will be implemented. For each of the four initial road segments to be rehabilitated as part of component 1, a Resettlement Action Plan (RAP) has been prepared, following Bank policies. Based on the information provided in these plans it is expected that there will be a total of around 1,100 affected assets, out of which 144 are rural houses and small rural shops. These numbers are subjected to change because several of these assets are within the right-of-way of the roads when in practice only those within the area of construction are actually affected by the project. The consultation process is described in each RAP. Each plan has been disclosed both on the MTC’s website and in the Infoshop.

In case additional works from MTC’s road rehabilitation and upgrading program are financed by this project (in substitution or in addition to the four currently identified), a Resettlement Policy Framework (RPF) has been prepared, following Bank policies. The RPF will guide the preparation of further RAPs if needed. The RPF has been disclosed both on the MTC’s website and in the Infoshop.

*Indigenous Peoples (OP/BP 4.10)* is triggered because two identified road corridors to be rehabilitated under the proposed project have the presence of indigenous peoples. For each of these road segments to be rehabilitated and upgraded as part of the project, an Indigenous Peoples Plan has been drafted and published, prior to appraisal. The consultation process is described in each IPP. Each plan has been disclosed both on the MTC’s website and in the Infoshop. In case additional works from MTC’s road rehabilitation and upgrading program are financed by this project (in substitution or in addition to the four currently identified), an Indigenous Peoples Planning Framework (IPPF) has been prepared, following Bank policies. As part of the preparation of this IPPF, a social assessment of a sample of indigenous communities has been prepared for areas where the GoP might invest in road rehabilitation and upgrading in 2010. The IPPF has been disclosed both on the MTC’s website and in the Infoshop.

All these social safeguards instruments (plans and frameworks for resettlement and Indigenous Peoples) have been found acceptable to the Bank. In addition, the MTC (*Provias Nacional* and DGASA) has developed a comprehensive list of regulations and guidelines that address Indigenous Peoples’ issues, consultation protocols and resettlement related issues and compensations. These regulations and guidelines have been inspired by the Bank safeguard policies as well as by the ILO Convention 169 (a detailed description of all these instruments is included in each policy framework).

## **10. List of Factual Technical Documents**

- **MTC (*Ministerio de Transporte y Comunicaciones*) (2003):** Plan Intermodal de Transportes (2004 – 2023), Lima, Peru.
- **MTC (*Ministerio de Transporte y Comunicaciones*) (2005):** *Programa Quinquenal 2006-2010 de Provias Nacional; Propuesta de Financiamiento*, Lima, Peru.
- **MTC (*Ministerio de Transporte y Comunicaciones*) (2009).** *Marco de Gestión Ambiental y Social* (Social and Environmental Management Framework).
- **MTC (*Ministerio de Transporte y Comunicaciones*) (2009).** *Marco Conceptual de Compensación y Reasentamiento Involuntario* (Resettlement Policy Framework).
- **MTC (*Ministerio de Transporte y Comunicaciones*) (2009).** *Marco de Pueblos Indigenas* (Indigenous Peoples Framework).
- **MTC (*Ministerio de Transporte y Comunicaciones*) (2009).** *Reporte de Evaluación Ambiental* (Environmental and Social Assessment Report).
- **MTC (*Ministerio de Transporte y Comunicaciones*) (2009).** *PACRI Ayacucho Abancay 50-98* (Resettlement Action Plan, road rehabilitation and upgrading of Ayacucho Abancay, km 50-98).
- **MTC (*Ministerio de Transporte y Comunicaciones*) (2009).** *PACRI Llama Cochabamba* (Resettlement Action Plan, road rehabilitation and upgrading of Llama Cochabamba).
- **MTC (*Ministerio de Transporte y Comunicaciones*) (2009).** *PACRI Cochabamba Chota* (Resettlement Action Plan, road rehabilitation and upgrading of Cochabamba Chota).
- **MTC (*Ministerio de Transporte y Comunicaciones*) (2009).** *PACRI Pte Reither Pte Paucartambo Villarica* (Resettlement Action Plan, road rehabilitation and upgrading of Pte Reither Pte Paucartambo Villarica).
- **MTC (*Ministerio de Transporte y Comunicaciones*) (2009).** *Estudio Ambiental Ayacucho Abancay 50-98* (Environmental Impact Assessment, road rehabilitation and upgrading of Ayacucho Abancay, km 50-98).
- **MTC (*Ministerio de Transporte y Comunicaciones*) (2009).** *Estudio Ambiental Llama Cochabamba* (Environmental Impact Assessment, road rehabilitation and upgrading of Llama Cochabamba).
- **MTC (*Ministerio de Transporte y Comunicaciones*) (2009).** *Estudio Ambiental Cochabamba Chota* (Environmental Impact Assessment, road rehabilitation and upgrading of Cochabamba Chota).
- **MTC (*Ministerio de Transporte y Comunicaciones*) (2009).** *Estudio Ambiental Pte Reither Pte Paucartambo Villarica* (Environmental Impact Assessment, road rehabilitation and upgrading of Pte Reither Pte Paucartambo Villarica).
- **MTC (*Ministerio de Transporte y Comunicaciones*) (2009).** *Plan de Pueblos Indigenas Comunidad Ñagazu* (Indigenous Peoples Plan Community Ñagazu).
- **MTC (*Ministerio de Transporte y Comunicaciones*) (2009).** *Plan de Pueblos Indigenas Comunidad Ocros* (Indigenous Peoples Plan Community Ocros).

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