

**NATIONAL RURAL TRANSPORTATION INFRASTRUCTURE PROGRAM  
STAGE TWO  
(RURAL ROADS PROGRAM - STAGE TWO)**

**(PE-0140)**

**EXECUTIVE SUMMARY**

<b>Borrower:</b>	The Republic of Peru	
<b>Executing agency:</b>	Ministerio de Transportes, Comunicaciones, Vivienda y Construcción (MTC) [Ministry of Transport, Communications, Housing and Construction]	
<b>Amount and source:</b>	IDB (OC):	US\$ 50 million
	Cofinancing (WB):	US\$ 50 million
	Local:	<u>US\$ 51 million</u>
	Total:	US\$151 million
<b>Financial terms and conditions:</b>	Amortization period:	20 years
	Grace period:	4,5 years
	Disbursement period:	4,5 years
	Interest rate:	variable
	Inspection and supervision:	1 %
	Credit fee:	0.75%
	Currency:	U.S. dollars, Single Currency Facility
<b>Objectives:</b>	To improve access by poor rural populations to basic social and economic services and income-generating activities through the provision of a dependable and integrated system of rural roads.	
<b>Description:</b>	<p>The program is the second stage in a large project to rehabilitate and maintain rural roads in areas in the sierra with the highest poverty levels. The program, which is limited in its investment capacity compared to stage 1, seeks to augment geographic coverage in the 12 departments in where it is active, with a view to consolidating the socioeconomic benefits and building on the institutional and financial gains already made.</p> <p>The physical goals of stage 2 are to rehabilitate 3,225 km of rural roads, 350 km of secondary roads, 3,100 km of nonmotorized roads, provide routine maintenance for all the roads that were rehabilitated in stage 1 (11,300 km) and those rehabilitated during this second stage.</p>	

It will also provide periodic maintenance for 6,500 km rehabilitated in stage 1 which have reached the end of their useful life. The following pilot projects have been included in this stage to develop new actions: (i) a pilot intermodal transport project in the jungle that will, in the framework of sustainable development, improve access in areas where river transport plays a key role and (ii) a pilot project to transfer responsibility for managing the program's roads to local authorities.

In the institutional sphere, the program will: (i) increase municipal participation in financing routine and periodic maintenance; (ii) revise the technical procedures and costs of road maintenance microenterprises to promote their growth, improve their technical efficiency and achieve greater acceptance of them by municipal authorities and communities; (iii) develop and implement a sustainable system for municipal management of the rural road system, with technical, institutional and financial support from the central government; (iv) bolster the MTC's planning capacity and its ability to design policies and strategies for rural transportation; and (v) assist communities, microenterprises and local governments in developing productive activities and economic undertakings by establishing a local development window (paragraph 2.19(d)).

There is one central unit and 11 area units in the departments in which the program is to be implemented to ensure that is carried out more effectively.

**The Bank's  
country and  
sector strategy:**

The program will contribute to the following aspects of Bank strategy: (i) support the rehabilitation and expansion of productive infrastructure; (ii) contribute to poverty reduction and improve the coverage and efficiency of social services; (iii) support modernization of the public administration on the provincial and district levels; and (iv) support the provision of public goods and services to help integrate agricultural producers into the market.

**Environmental  
and social  
review:**

The road projects in stage 2 are simple and do not include paving or changes in alignment. The ex post environmental evaluation of a sample of roads rehabilitated in stage 1 confirmed that their environmental impacts are direct and small, chiefly associated with the works, and can be avoided or mitigated using known measures that are set forth in the environmental guides of the Programa de Caminos Rurales (PCR) [Rural Roads Program, Ministry of Transportation, Communications, Housing and Construction]. The program's operations manual also includes an environmental management system that acceptably integrates the socioenvironmental procedures to be complied with in all stages of a road project. Stage 2 includes environmental training activities for the PCR, its zonal units

and municipal authorities, and independent technical and environmental audits to be performed every six months.

Although the multimodal pilot project in the jungle involves small works and a limited area of influence, it could have indirect impact as a result of the development it will permit. As a condition precedent to the investments in infrastructure, a regional socioenvironmental impact study will be conducted for the pilot project, which will include extensive community consultation and participation. A plan of action will be designed based on the results, that includes preventive and mitigation measures and a strict evaluation and monitoring system that will permit corrective actions and adjustments for smooth and timely implementation. The pilot project includes the costs of mitigating potential direct and indirect impacts.

The program was reviewed by CESI at its meetings on 1 June 1999 and 1 June 2001 and its recommendations have been included in this loan proposal.

**Benefits:**

The program will benefit the poorest communities in the sierra that did not benefit during stage 1. There are 3.5 million potential beneficiaries living in isolated rural areas. The expected benefits are similar to those in stage 1, i.e. a sharp reduction in travel costs and times, expansion and diversification of the supply of transportation services, easier access to social services such as education and health care and to economic services (regional markets, agricultural inputs, rural extension services, public services, etc.). Better accessibility and dependability of the transportation system should, in the medium term, lead to economic growth in the area of influence of a road, thereby increasing income-earning capacity.

In the institutional sphere, the program will bolster the capacity of municipalities in the provinces to plan and manage the road systems in their jurisdiction, improving coordination with the districts and the use of funds, with stress on road maintenance. The program will support gradual decentralization of responsibility for execution, under clearly-established procedures, and will provide technical, institutional and financial support for participating municipalities.

**Risks:**

The main risks are associated with: (i) development of a sense of project ownership by communities and local governments that is linked to their own progress; (ii) willingness of the local authorities to assume responsibility for road management; (iii) scant municipal financial capacity for taking over a larger share of the cost of road maintenance; (iv) poor relations between the provincial capitals and the districts under their jurisdiction, which make it difficult to reach

maintenance cofinancing agreements; and (v) slow execution as a result of fiscal restrictions. To mitigate these risks, the program has developed a participative process that permits municipalities to strengthen their institutional capacity in tandem with the transfer of management and financial responsibilities. Policy and fiscal decentralization will be pivotal in mitigating this risk. The program design embodies management methodologies that have been adapted to accommodate the local governments' presently low capacity. A deepening of the decentralization process will also benefit the program. The technical and environmental risks are small, as demonstrated in stage 1, and are satisfactorily dealt with in the operations manual

**Special  
contractual  
clauses:**

**Precedent to the first disbursement**

1. The government's maintenance cofinancing mechanism must be operative and it must have signed at least 65 participation agreements with beneficiary municipalities (paragraph 2.11); and
2. The PCR must have approved the update of *the program operations manual* and obtained the Bank's nonobjection (paragraph 3.11).

**Other conditions**

*Implementation*

1. The program will only finance activities in provinces that have signed participation agreements with the PCR (paragraph 3.3);
2. If a municipality in the provinces does not comply, to the Bank's satisfaction, with the obligations stemming from its agreement, the PCR: (a) will not include new activities in that jurisdiction until the municipality has taken corrective measures satisfactory to the Bank; and (b) exclude all activities from its annual program, with the sole exception of activities under way or for which contracts are in effect (paragraph 3.4);
3. The PCR will present an annual program of activities no later than 30 November of each year, with regard to which consultations have been held with the participating municipalities (paragraph 3.16).

*Follow up and evaluation*

4. The PCR will submit quarterly progress reports to the Bank (paragraph 3.14), commission audits of technical (paragraph 3.13) and financial (paragraph 3.34) performance, conduct an assessment of social, economic, and environmental impact of program activities (paragraph 3.17), hold meetings with the Bank every six months to review implementation of the program (paragraph 3.15), and organize a special evaluation meeting in November 2003 (paragraph 3.17).
5. If, as a result of that work, the Bank determines that progress in the program is unsatisfactory, the PCR will take corrective measures to the Bank's satisfaction, in order to reestablish efficient execution and achieve the objectives (paragraph 3.15).

*Disbursements*

6. Spending by a provincial municipality that has not signed its participation agreement before the costs were incurred will not be eligible for retroactive financing (paragraph 3.3);
7. Spending on civil works in the pilot multimodal transport project may only begin when the PCR, prior to 31 October 2002, has performed the following to the Bank's satisfaction: (a) made the regional socioenvironmental impact study, the environmental action plan and the indigenous development program available to the public; (b) designed the monitoring system to evaluate social, economic and environmental impact, which must include participation by communities and indigenous groups; (c) agreed upon a detail frame of action with the different stakeholders in each area in the pilot project and identified sources of funding for the works and mitigation measures; and (d) reached agreements with local authorities, other donors and civil society organizations for coordinated and integrated action. Bidding on the civil works may not begin prior to 28 February 2003 or until four months have elapsed after the regional socioenvironmental impact study is made public (paragraph 2.17).

**Poverty-targeting and social sector classification:**

This operation qualifies as a social equity-enhancing project, as described in the indicative targets mandated by the Bank's Eighth Replenishment (document AB-1704). Furthermore, this operation qualifies as a poverty-targeted investment (PTI) under the geographic criterion. The program will consolidate its presence in the poorest departments and, within them, in the provinces with the highest poverty indexes. The work to develop comprehensive methodologies for transferring management of rural transportation infrastructure in pilot provinces does not invalidate this classification. The country will not be using the 10 percentage points in additional financing.

**Exceptions to Bank policy:**

Routine maintenance of the rehabilitated roads is a key part of the program's sustainability strategy. Securing financing for this activity will make it possible to achieve the objectives in the areas of municipal participation in road management and the operation of road maintenance microenterprises that will create jobs and bring social and economic benefits. The inclusion of the cost of routine maintenance (US\$30.1 million out of a total of US\$151 million or 20 percent) in the program, which will be used to contract microenterprises, will ensure that this major institutional and technical goal can be attained. The IDB will finance US\$5.2 million (17 percent) of the cost of routine maintenance (for 10.4 percent of its loan). This financing is an exception to policy OP-707 *Maintenance and conservation of physical works and equipment*, which is requested here (paragraph 2.14).

**Procurement and review procedure:**

International competitive bidding will be compulsory for contracts for works over US\$3 million, consulting services over US\$200,000 and the procurement of goods and related services over US\$250,000. Local competitive bidding will be used for works costing more than US\$50,000, following procedures acceptable to the Bank.

Exception to the procedures for contracting works. Direct contracting in amounts not exceeding US\$50,000 per contract will be permitted for (i) *Rural roads committees* for construction of nonmotorized roads (paragraph 2.15); (ii) *road maintenance microenterprises* established under the program (paragraph 2.14); and (iii) *municipalities and small works contractors* for periodic and emergency maintenance requiring the intensive use of equipment. The aggregate cost of these contracts may not exceed US\$3 million (paragraph 2.14). Direct contracting of small works contractors and municipalities for these activities will require prior authorization from the Bank.

Exception to the procedures for contracting services. To establish the local development window (paragraphs 2.19 (d) and 3.24), the PCR may sign a contract with CARITAS of Peru to manage the facility.

CARITAS, for its part, would also contribute financial resources, professional experience and geographic coverage (it has 48 diocesan organizations that are active in participative processes, the evaluation of social needs and the structuring of development initiatives). The agreement would clearly spell out the responsibilities of the parties. Under the arrangement, CARITAS will be a sole-source supplier, and therefore an exception to Bank contracting procedures is requested. The program contribution will amount to US\$560,000, with the Bank providing US\$237,000. Should the PCR opt to use another entity to manage the facility, it will have to adhere to the Bank's standard procedures.

Procurements of goods will mainly be limited to office equipment, computers and vehicles appropriate for the zones where the program will be active. International competitive bidding will be required for procurements worth more than US\$250,000.

All the bid processes for civil works costing more than US\$1 million and all procurements of goods will be subject to prior examination by the Bank. The same will hold true for the first bid for works conducted by each zonal unit or authorized municipality. In all other cases, the Bank will perform ex post reviews.

Consulting services estimated to cost US\$100,000 or over, all sole-source contracts, and contracts for individual consultants over US\$50,000 will be subject to prior review. For consulting services below these thresholds, only the terms of reference for contracts not covered in the program's operations manual will be subject to prior review. In all other cases, the Bank will perform ex post reviews.

## **I. FRAME OF REFERENCE**

### **A. Socioeconomic framework**

- 1.1 The Peruvian government is implementing a strategy for economic growth and poverty reduction. The macroeconomic reforms launched in 1990 included reduction of the public deficit, removal of price controls, elimination or reduction of subsidies, economic liberalization and privatization of State activities. This policy resulted in rapid economic growth for most of the decade. However, although social and poverty indicators have improved, social well-being has not been distributed equitably, with rural areas—particularly the sierra and its indigenous population—lagging far behind.

### **B. Rural development and poverty**

- 1.2 Rural poverty continues to be very high. In the 12 departments where the Programa de Caminos Rurales (PCR) is active, which include the poorest in the country, 70 percent of the rural population lives below the poverty line and 35 percent lives in extreme poverty.<sup>1</sup> Therefore, social integration continues to be a priority in Peru, with stress on improving access for poor people living in remote areas to education and health services, land ownership, productive infrastructure and economic and commercial services.
- 1.3 Rural poverty reduction is hampered by several factors in which the transportation sector plays a part. The first is the limited access at the disposal of the rural population and its consequent isolation. The problem is apparent in: (i) deficient rural infrastructure and the scant transportation services available, with its impact on access to social, economic and government services; (ii) poor linkage of producers and markets, which results in high transportation and transaction costs (lack of information on market prices, products and demand, negotiating and tracking contracts, etc.); (iii) social and economic isolation, which limits employment opportunities outside the immediate area and expansion of productive activities through interaction with centers of demand, standing in the way of economic specialization; and (iv) fewer opportunities for income-earning activities.
- 1.4 Another factor is the weak institutional and financial base for rural development. The weakness of local governments and provincial and district municipalities is sharpened by the absence of a firm commitment by the central government to administrative and fiscal decentralization. Government decision-making and fiscal administration are highly centralized and the assignment of responsibilities to local governments is nowhere close to an equilibrium point. The weakness of local

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<sup>1</sup> According to FONCODES, a family is poor if its income is less than the cost of a basic consumption basket. A family lives in extreme poverty if its income does not cover minimum nutritional requirements. The cost of both baskets varies by region in function of eating habits and prices. The Bank's criteria are less restrictive (paragraph 4.5).



institutions in the area of project management and administration, particularly in rural communities, is both a symptom of underdevelopment and an impediment to social and economic growth.

- 1.5 Last, poor coordination among the central government's rural poverty alleviation programs and excessive dependence on them should be underlined. Existing programs suffer from lack of coordination, duplication of efforts and lack of clear objectives, for a waste of resources, knowledge and experience. The quality of the different government programs should be improved, local organizations need to be strengthened and an institutional base must be developed to spur self-management initiatives and create room for growth, led by private initiative.

#### **C. The highway sector**

- 1.6 Overland transport is the country's main form of transportation. Nonetheless, Peru has very limited highway infrastructure in comparison with similar countries in Latin America. The percentage of public spending on transport fell considerably – from 6.1 percent in 1981 to 2.5 percent in 1990. Investments have risen little by little since 1991, to US\$370 million in 1994, largely due to highway rehabilitation programs with multilateral and bilateral financing. The figure has held steady since then, thanks to the priority attached to the sector by the government, except for the last two years, owing to the fiscal crisis.
- 1.7 The road system is about 70,000 km long, with 11 percent paved, 19 percent gravel and 70 percent dirt, with no technical layout. The system is organized on three levels: (i) 16,000 km of national highways; (ii) 14,000 km of secondary or departmental roads; and (iii) 40,000 km of rural or tertiary roads. Although the condition of the national highways has improved since 1991 as a consequence of maintenance and rehabilitation programs, the situation in the secondary and rural systems continues to be critical. The scant dependability of these highways and roads has a negative impact on the cost of using them and, therefore, on the quality of the transportation services available.

#### **D. Rural roads**

- 1.8 The rural road system provides access to 30 percent of the population and to 90 percent of the country's urban centers. Over 75 percent of the system is in bad condition. The absence of practicable roads is the result of poor maintenance and difficult topographic and climate conditions, which make it impossible or very costly to use them. This has held back development and contributed to the isolation of poor rural communities. The exception is the more than 11,000 km of roads rehabilitated and maintained by the rural transportation infrastructure rehabilitation program, financed by the IDB and the World Bank, that ended in December 2000.

- 1.9 To develop rural transportation, it is necessary to: (i) improve the practicability of the rural road system; (ii) interconnect transportation systems; (iii) provide medium- and long-term sustainability for rehabilitation and maintenance; (iv) boost the capacity of municipalities to finance roads; and (v) develop the technical and institutional capacity of local governments to manage them.

**E. Institutional situation in the transportation sector**

- 1.10 The Ministry of Transport, Communications, Housing and Construction (MTC) is the lead agency in all modes of national transportation. It acts through its Vice-Ministry of Transport (VMT), whose organizational structure is based on directorates general that are divided by modes, supplemented by specialized executing units for roads, public companies that operate the railways, ports and airports.
- 1.11 The MTC has a large number of agencies responsible for managing the road infrastructure. For the primary network, it acts through the special transportation rehabilitation project (PERT) for improvements, rehabilitation and expansion and it uses the national highway maintenance system (SINMAC) for their maintenance. For the secondary network, it acts through the Directorate General of Roads (DGC), which is responsible all activities. The Rural Roads Program (PCR) bears exclusive responsibility for the tertiary system. SINMAC and the DGC, which are mainly financed from their own resources, often become involved with roads that are outside their main areas of action.
- 1.12 Other national government agencies are involved in the network. The Ministry of the Office of the President, through the Temporary Regional Administration Councils (CTARs) is involved in the departmental system and in the construction of small road works through the National Compensation and Social Development Fund (FONCODES). The Ministry of Agriculture and the National Development Authority (INADE) build roads linked to agricultural development projects. The army is active in areas where there are public security risks. There is little or no coordination between them and the MTC and their activities are more closely linked to construction and rehabilitation or to coping with emergencies than to keeping roads in serviceable condition.
- 1.13 The MTC, as part of loan 1150/OC-PE, has prepared an action plan for institutional reform, intended to adapt the ministry's portfolio to a structure based on the different levels in the system. As the plan takes shape,<sup>2</sup> the roles of the different agencies and the PCR, in particular, will become more specialized and the

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<sup>2</sup> The action plan's objectives are: to improve the MTC's planning capacity; restructure the sector based on the classification and functionality of the different systems; establish agencies to take full control over each of them; and strengthen the capacity to regulate and monitor environmental aspects. Owing to fiscal limitations, the loan execution is far behind schedule, which has affected development of the plan.

responsibilities will be clearly assigned. The plan will also establish a long-term role for the PCR in supporting municipal management of tertiary roads. As for the other ministries involved in the sector, the plan's explicit strategy has been not to intervene and to focus on the MTC so that, when its institutional structure has been improved, it can then set about consolidating responsibilities.

- 1.14 As for rural roads, the Municipalities Act assigns responsibilities to the municipal jurisdiction on the provincial or district levels, and therefore the MTC has no formal legal mandate to act. The ministry's strategy is to take part in the rehabilitation and maintenance of tertiary roads, while helping the municipalities to develop their planning and management capabilities so that they will be able to fully shoulder their responsibilities.

**F. Bank strategy and experience in the sector**

- 1.15 The program will contribute to the following aspects of the Bank's country strategy: (i) support rehabilitation and expansion of productive infrastructure; (ii) contribute to poverty reduction and better coverage and efficiency of social services; and (iii) support modernization of the public administration on the provincial and district levels.
- 1.16 In the highway sector, the Bank's strategy is to act simultaneously on the primary and tertiary systems, with a view to enhancing management and planning capacity for both systems, specializing the agencies responsible and clearly defining their responsibilities over their particular system. In the transportation sector, the Bank supports the modernization of overland transport regulations, participation by the private sector in providing infrastructure and services and developing public passenger transport in urban areas. The secondary system is absent from this strategy and its omission is part of an explicit decision not to become involved in a system that has too many institutional players to permit orderly and effective action.
- 1.17 The nature and objectives of the proposed program are consistent with the government's plan and with objectives of the Eighth Replenishment and the Bank's strategies. The program is included in the list of projects established in the country paper and in the aide memoire of the programming mission of 19 February 1998. Its approval has been delayed as a result of the recent political and fiscal crises. Loan 901/OC-PE, the rural transportation infrastructure rehabilitation program (rural roads program stage 1), described in paragraphs 1.19 to 1.23, ended in December 2000.
- 1.18 Over the last decade, the Bank has provided intensive support for the highway sector. In 1991, it approved the highway rehabilitation and improvement program (loan 651/OC-PE for US\$210 million), which rehabilitated 2,315 km and provided periodic maintenance for 424 km of the Pan-American and Central-American highways, making a start on the recovery of the transportation sector that had

suffered from years of neglect in the areas of management and investment. In 1994, it approved stage 2 of the highway rehabilitation and improvement program (loan 836/OC-PE for US\$252 million), which rehabilitated 1,284 km of main highways and is close to full disbursement.<sup>3</sup> Stage 3 of the highway rehabilitation and improvement program (loan 1150/OC-PE for US\$300 million), which was approved in December 1998, is under way. It will rehabilitate approximately 500 km of main highways and contribute to the sector's technical, administrative and financial development by supporting good maintenance of the main system. Owing to budget restrictions, execution of the program has been slow. Last, the Bank approved an emergency operation in the wake of El Niño (loan 1058/OC-PE for US\$150 million), which included a component to rehabilitate 1,944 km of roads affected by the phenomenon.

#### **G. Rural roads program, stage 1**

- 1.19 The MTC has completed stage one of the rural transportation infrastructure rehabilitation program, which is intended to alleviate rural poverty by improving the road and transportation infrastructure.<sup>4</sup> Through institutional actions and investments, the program helped to improve access to social and economic services and enhance the quality of life in the municipalities where it was active.
- 1.20 To execute it, the MTC created the Programa de Caminos Rurales (PCR), which began life as a centralized agency and gradually established local offices (zonal units) that were transferred operational responsibilities. The PCR has proved to be an efficient and capable executing agency, as demonstrated by the results achieved in stage 1 and the continuity of its activities after that stage was completed.
- 1.21 Stage 1 rehabilitated 8,882 km of tertiary roads and 2,368 km of departmental roads. They have all been included in a routine maintenance program. Over 80 percent of the remaining 43,000 km of secondary and tertiary roads are in poor condition and require rehabilitation and periodic maintenance. Stage 1 also rehabilitated 3,053 km of nonmotorized roads and 174 km of streets in small towns. When it ended, rehabilitation of rural roads had exceeded the physical goals by 19 percent, rehabilitation of secondary roads by 8 percent, routine maintenance by 19 percent, street improvement by 23 percent and improvement of nonmotorized roads by 104 percent.
- 1.22 Stage 1 benefited 314 districts out of a total of 1,103 districts in the 12 departments where the PCR operates. It directly benefited close to 2.8 million rural dwellers and had 700,000 indirect beneficiaries, if the population living in settlements within

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<sup>3</sup> US\$7.8 million are pending disbursement.

<sup>4</sup> The program was financed by the IDB (loan 901/OC-PE for US\$90 million), the World Bank (loan 3962-PE for US\$90 million) and the government (US\$90 million), for a total of US\$270 million. The funds were fully disbursed in December 2000.

5 km of the rehabilitated roads is included. At 31 December 2001, 416 maintenance microenterprises had been established, responsible for almost 11,000 km of roads, which created about 4,800 permanent jobs for their members and 32,333 temporary jobs.

- 1.23 The social and economic impact studies for stage 1 showed that the short-term benefits relating to travel times and costs and the supply of services have increased significantly. This improvement has translated into better access to and increased use of social infrastructure, such as education and health services, and more extensive use of productive and commercial services. Although the studies do not clearly and conclusively demonstrate that the rehabilitated roads have

**Table 1:** The impact studies (in 2000) of the projects to rehabilitate rural roads in the Peruvian sierra show that: (i) the costs of freight and passenger transport fell by 59 percent and 29 percent, respectively; (ii) 67 percent of the people interviewed said that access to education had improved; 44 percent of families with children at school said there had been a significant reduction in travel time to school (20 percent reported a reduction of 35 percent); (iii) the percentage of families with access to health services is higher among program beneficiaries than among nonbeneficiary families (82 percent vs. 73 percent); (iv) 82 percent of the people interviewed said they had better market access; and (v) beneficiaries conducted more commercial transactions outside their communities than nonbeneficiaries (71 percent vs. 42 percent of all production and consumption).

contributed to economic development and poverty reduction, the data show that the program has led to an improvement in the living conditions of the local population at a time when national poverty indicators have worsened.

## **H. Lessons learned**

- 1.24 Stage 1 focused on the poorest provinces, where the lack of resources and institutional capacity, compounded by the absence of a clear definition by the national government of the decentralization process, made progress in transferring responsibilities to local governments impossible. This has been taken into account in the preparation and design of the proposed project, which includes institutional actions and a pilot project with the better-off municipalities to help the process along.
- 1.25 The impact studies have demonstrated that rural poverty is rooted in a series of factors and that accessibility, while necessary and crucial, is not the only socioeconomic aspect that requires improvement. Systematic integration of transportation with other construction works is required to make poverty reduction strategies more effective. During phase one, the MEMV managed to generate the savings and investment capacity which resulted in the establishment of new

companies ("productive undertakings")<sup>5</sup>. To consolidate them, the microentrepreneurs sought the assistance of administrative monitors (PCR staff providing support for MEMV management with incorporation, financial management, tax registration, pensions, etc.) which offered assistance in matters outside their area of responsibility, identifying a need to develop local production and to make it competitive. To respond more comprehensively to this need and to prevent the PCR from losing sight of its goal as an agency devoted exclusively to land management, it was thought that support should be provided for the establishment of a local development window as an adjunct to the program under the management of an NGO to coordinate strategic partnerships with civil society, other government agencies and donors, to complement the PCR's work with other actions to promote sustainable development.

- 1.26 The mobility requirements of the very poor must be recognized. Their incomes are determining factors in that regard, since they often do not have cash or anything to barter to pay for commercial services and have to travel on foot. In rural areas, facilitation of nonmotorized transport is crucial for assisting people living in dire poverty. Stage 2 of the project will contribute significantly to the improvement of nonmotorized roads.
- 1.27 At the start of stage 1, the need for infrastructure was so great and the demands so pressing – in a policy framework that was not suitable for supporting decentralization – that the PCR placed technical actions for road rehabilitation and maintenance and the associated institutional actions ahead of developing local road management capacity. Stage 2 will focus on strengthening the municipal role in planning, managing and financing local systems.
- 1.28 The findings during stage 1 have confirmed the validity of the principles and strategy used in the project's design. In particular, the following lessons learned are relevant for improving the sustainability of stage 2. (i) Participation by beneficiaries is a catalyst for project sustainability, although it involves some risks. In the sierra, where broken promises, poor results and the disappearance of the authority after the short-term tasks ended, has led communities to view government intervention with skepticism. One of the PCR's main assets is the credibility it has won from communities and local authorities, thanks to its strict compliance with the commitments it made during the participative process and the quality and continuity of its activities. (ii) The fragile dynamics of local development demand close monitoring of the distribution of benefits. For example, road maintenance microenterprises are accepted by communities and local governments. However, that support could weaken if the communities feel they are not sharing in the economic benefits that the program offers to the microentrepreneurs. This makes it

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<sup>5</sup> Nearly 40% of the MEMVs started new productive projects (trout farming, flour mills, marketing of honey, transport services, etc.) and 21% were discontinued for different reasons (lack of a market or proper technical assistance, or insufficient financing).

doubly important to support local development initiatives to benefit the communities where the microenterprises are located and to create opportunities for other community members to replace current workers if they become financially independent. (iii) When the collateral benefits are recognized by the players, they support sustainability, as is demonstrated by the support from local authorities for the maintenance cofinancing mechanism, since in addition to road maintenance, they valued the role played by the microenterprises in the community.

- 1.29 Stage 1 demonstrated the technical feasibility of the rehabilitation and maintenance criteria used. Roads whose rehabilitation cost was low, subject to a strict program of routine maintenance, were able to last out their expected useful life. Thanks to the maintenance management system based on microenterprises established by residents in a road's area of influence, the rehabilitated rural roads suffered little damage and were quickly put back into service after El Niño. Bank participation in financing maintenance was crucial for that system and its continuity.

## **II. THE PROGRAM**

### **A. Objectives**

- 2.1 The objective is improve access by poor and very poor rural populations to basic social and economic services and income-generating activities. The proposed project is the second stage in a rural roads program that began in 1995, whose purpose was to provide a dependable and integrated system of rural roads that would complement the government's multisector poverty-reduction strategy.
- 2.2 The specific objectives are to: (i) link rural zones where access is poor and the population is numerous to social services and regional economic centers; (ii) provide technically-undemanding, low-cost rehabilitation and maintenance for rural and nonmotorized roads; (iii) create a limited number of jobs and promote income-generating activities in rural areas; and (iv) build up the capacity of local institutions for sustainable management of rural roads.

### **B. Strategy**

- 2.3 The program to rehabilitate rural transportation infrastructure (rural roads program, stage Two, CR2) responds to the need to provide rural communities with transportation infrastructure and services that ensure permanent access to social and government services, economic and commercial services, and job and income-earning opportunities.
- 2.4 The program plans to act in the same 12 departments as in stage 1, where the PCR is present.<sup>6</sup> The rationale behind that decision is simple:
  - a. To consolidate the progress made in stage 1 and then expand the project geographically in a later stage;
  - b. To magnify social benefits by providing a denser and better integrated rehabilitated road system in good operating condition. Social infrastructure (schools health posts) becomes more accessible and therefore more people use it. Other development programs and public services involving infrastructure (electricity, telephones, water) and community services (security, justice) have their work facilitated.
  - c. To entrench the economic benefits. The continuity of the program encourages the population to invest and expand their productive activities, which have long been postponed by the lack of credibility and continuity of government action.

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<sup>6</sup> Ancash, Ayacucho, Apurímac, Cajamarca, Cusco, Huancavelica, Huánuco, Junín, Madre de Dios, Puno, Pasco and San Martín.



Better access to economic services such as agricultural extension, better market information and more competitive products permit campesinos to make better decisions over a broader time horizon, which encourages diversification of production and less dependency on on-farm consumption. Access to better opportunities for new income-generating activities will be provided through the local development window.

- d. To solve the challenges of municipal cofinancing for routine maintenance, which threaten to limit the program's expansion. The costs of routine maintenance absorb a growing amount of program resources as the rehabilitated system grows. As the municipalities appropriate the benefits, they should assume those costs partially, but in an increasing proportion. The institutional effort is very high owing to scant municipal fiscal capacity and the consequent political costs associated with this task.
  - e. To focus the PCR's institutional capacity on building up and providing local training for municipal governments to enable them to gradually assume responsibility for road management. The program will support a pilot road management project in one province, with a view to developing mechanisms for municipal planning and management of rural roads and the monitoring and supervisory system that the PCR will require before transferring funds to be administered by that province. Arequipa was selected owing to its higher institutional, financial and technical capacity, but mainly on account of the interest and support for the initiative demonstrated by the provincial and district mayors. New provinces will be included in the road management decentralization project during the program.
  - f. To break down maintenance costs by season, region, demand, etc. During stage 1, the program focused on demonstrating the feasibility of the thesis that roads that are inexpensive to rehabilitate could provide adequate access if they were included in a maintenance system based on appropriate execution and institutional arrangements. A flat, uniform routine maintenance cost was applied, despite regional differences. The thesis was demonstrated and is one of the success stories of stage 1. However, for municipalities to contribute to maintenance costs, they must be convinced that the results are effective and that resources are being used efficiently.
  - g. To develop methodologies for supporting multimodal transport through a pilot project in a department in the jungle, where social and environmental conditions are more complex than in the sierra.
- 2.5 The changes that this strategy will introduce into stage 2 are: (i) *geographic coverage* will be limited to the 12 departments in stage 1 but, if there are eligible communities in those departments whose social, economic and commercial relations require roads outside the project area, such roads could be rehabilitated

with the Bank's nonobjection; (ii) *institutional coverage* will include a pilot project in some municipalities with better institutional and financial capacity, to explore the possibility of their gradually assuming responsibility for road management – the provincial municipality of Arequipa was chosen for the project; (iii) *functional coverage* will include, as a pilot project, three small intermodal transportation systems in the jungle;<sup>7</sup> and (iv) *socioeconomic coverage* will open a local development window to connect the rural population to economic development opportunities.

### C. Description

- 2.6 The national rural transportation infrastructure program, stage 2, has been designed as a multi-year plan. This is because works will be identified and selected by communities and local authorities, which makes their a priori identification impossible. Also, because of their simplicity and low cost, a large number of works will be undertaken. Strict project eligibility and evaluation criteria will ensure accomplishment of the program's objectives. Execution will be facilitated thanks to the cooperation of local governments. The PCR is the only MTC agency involved with rural roads and takes a comprehensive approach to the tertiary network in the departments where it is active, covering technical, managerial, institutional and financial aspects.
- 2.7 Stage 2, which is a relatively smaller financial operation than stage 1, will maintain a roughly stable annual level of activities, measured in new investments plus maintenance costs. It will be executed over four years. The annual and total physical rehabilitation goals will be smaller than in stage 1, given the implementation period and the financial weight of routine maintenance. Like stage 1, stage 2 will be cofinanced by the IDB and the World Bank.
- 2.8 The proposed program will *rehabilitate and maintain productive infrastructure*. Doing so in relatively isolated rural areas will promote agricultural development and integrate producers into the market. By improving access for communities, they will make more use of social services, which can be delivered with greater efficiency. By working on practical aspects of municipal management, the project will promote the modernization of provincial and district governments and will support, without this being an explicit objective, political decentralization. In short, the program will channel funds into projects with a direct impact on rural poverty reduction.

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<sup>7</sup> Stage 2 plans to carry out a pilot project in the province of Ucayalli, on the river of the same name, involving river transport for three localities lying between Atalaya and Pucallpa. The project will rehabilitate infrastructure (docks and piers) and access roads (rural and nonmotorized roads). It will study the potential impact on the population, particularly indigenous groups and women, coordinating its activities with other government agencies, taking precautions against and minimizing negative impact such as immigration and illegal land occupation, deforestation, illegal activities (fishing, hunting), etc. Activities will be limited in scope and their execution will be closely monitored.

- 2.9 Stage 2 attaches great importance to *institutional strengthening*, including community participation in the selection and prioritization of works, the environmental management of road maintenance, and assistance to enable municipalities to shoulder full responsibility for road management, including the development of markets of consultants and contractors, administrative procedures for transparent contracting, road planning, institution building for municipalities, and the development of financial mechanisms to provide sustainability for road investments and maintenance.
- 2.10 As the local counterpart, the program includes funds provided by the beneficiary municipalities as *cofinancing for routine maintenance*. When the operation was being prepared, the PCR, the Transportation Planning Office (OPLA/MTC) and the Public Investment Office of the Ministry of Economic Affairs and Finance (ODI/MEF) developed a mechanism for maintenance cofinancing that established the ability to pay of the municipalities that benefited under stage 1. The mechanism, which is based on tax transfers under the Municipal Compensation Fund (FONCOMUN, Decree Law 776 of 31 December 1993), established an initial contribution of US\$300/year for each kilometer in the tertiary system in each jurisdiction, which will be automatically transferred to a special account with Banco de la Nación that would be administered by the PCR.<sup>8</sup> The contribution, to be paid jointly by the provincial municipalities and their districts, takes account of their fiscal capacity and the length of the rehabilitated system in each province and district. Execution of new works in a province by the PCR will be subject to the signature of participation agreements that include the maintenance cofinancing mechanism.
- 2.11 Given the importance of maintenance cofinancing for stage 2, the MTC and the MEF will have to approve a regulatory framework that will permit the participating municipalities to use transfers under FONCOMUN to pay their share of financing for routine maintenance above the 30 percent ceiling that the fund currently imposes on recurrent expenses. The PCR must also have signed at least 65 participation agreements with municipalities that benefited under stage 1, containing commitments to contribute technical and financial resources to the maintenance cofinancing mechanism, all to the Bank's satisfaction and precedent to the first disbursement. The PCR now has obtained the consent of these municipalities, and only FONCOMUN's consent is needed for the agreements to be signed.

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<sup>8</sup> The cofinancing mechanism was analyzed at workshops organized by the PCR during the second half of 2000, in which each of the 104 beneficiary provincial municipalities participated, together with their district authorities. Twenty percent of the municipalities were willing to make their contributions out of recurrent expenses from FONCOMUN and an additional 50 percent were willing to contribute if they could use the fund's investment resources. The PCR is examining the situation of the remaining municipalities. The MEF has approved the reforms that are to be made to FONCOMUN.

- 2.12 The program will have the following components: (i) rehabilitation and upgrading of rural roads and secondary connecting roads; (ii) routine and periodic maintenance of rural roads and secondary connecting roads; (iii) improvement of nonmotorized roads; (iv) pilot project for provincial road management; (v) pilot project for multimodal transport; (vi) institutional strengthening and equipment; and (vii) project administration.

#### **D. Components**

- 2.13 *Rehabilitation and upgrading of rural and secondary connecting roads* (US\$50.1 million). Stage 2 will work on existing roads in the secondary (300 km) and tertiary (5,400 km) systems in the 12 participating departments. The technically-simple and inexpensive works will improve the access offered by lightly-traveled roads, making them passable for light vehicles travelling to and from the communities of the sierra. The roads will not be paved, realigned or broadened.
- 2.14 *Routine and periodic maintenance of rural and secondary connecting roads* (US\$48.3 million). Stage 1 demonstrated the advisability of guaranteeing that financing would be available for maintenance. Roads that have been rehabilitated inexpensively can last out their useful life when subject to a strict routine maintenance program. Stage 2 will continue with this practice and will also include periodic maintenance for roads in stage 1 that are nearing the end of their useful life. Routine maintenance (US\$30.1 million) will mainly be financed from the local counterpart. Periodic maintenance (6,500 km for US\$18.2 million) will be performed on roads that have been under routine maintenance for more than three years, which require more intensive activities. Maintenance on these roads will be supported by equipment to improve passability, returning them to a condition in which they can continue to be maintained by road maintenance microenterprises. Part of the work will be performed by the municipalities on force account or by small works contractors.<sup>9</sup>
- 2.15 *Improvement of nonmotorized roads* (US\$5.3 million). These roads were included in stage 1 as a pilot project and, in view of their community acceptance and impact, they will now be incorporated as a component. The program will finance improvements on 3,000 km, with stage 2 covering 70 percent of the cost of the works and the remaining 30 percent coming from the beneficiary communities in the form of unpaid labor. The work will be executed by rural roads committees,

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<sup>9</sup> The program can directly contract municipalities and small works contractors for periodic and emergency maintenance that requires the intensive use of equipment, and the nature of the activities and the way in which they will be carried out if there is no competition or there are not enough qualified bidders in the market and it is advisable to award contracts for the works directly under proper supervision. No contract may cost more than US\$50,000 and the aggregate costs may not exceed the program financing of US\$3 million. Direct contracting can only be used after presenting justification and obtaining prior authorization from the Bank.

which are organizations with legal status in the beneficiary communities, assisted by NGOs with respect to their internal organization, technical activities, management of the works and road maintenance.

- 2.16 *Provincial road management pilot project* (US\$2.8 million). This importance of this pilot project lies in the fact that the participating province (Arequipa), with support under stage 1, has prepared a provincial transportation plan and established a specific agency to attend to management of the tertiary system. The Provincial Road Authority (IVP), directed collectively by the provincial and district municipalities, is a suitable tool for the whole process of road management, from planning and building works to their maintenance and operation. During the pilot project, the PCR will transfer funds to the IVP to contract technical studies, supervisory services and rehabilitation of 150 km of rural roads, to be done in accordance with the standards and procedures established by the PCR. Stage 2 will pay for 60 percent of the cost of maintaining these roads, with the local authorities putting up the remaining 40 percent. When the pilot project is completed, the results will be used by 12 municipalities that develop sufficient institutional and organizational capacity to shoulder these responsibilities. The pilot project will be closely monitored since it is crucial for program decentralization.
- 2.17 *Multimodal transportation pilot project* (US\$4.9 million). The main objective of the project will be to develop, test and evaluate technical, environmental, social, economic, institutional and financial methods and procedures for improving rural access in parts of the jungle where river transport plays a key role and which can be replicated in future in other localities, as a contribution to sustainable development of the region. The pilot project chiefly includes small intermodal transportation projects to be implemented in three localities on the Ucayali river, including: (i) construction of six small docks and on-land storage and protection facilities to improve cargo management and make access by workers and passengers easier and safer; (ii) rehabilitation of 125 km of rural roads that link towns to the docks or to nearby production areas;<sup>10</sup> and (iii) improvement of 140 km of nonmotorized roads to give small settlements access to a rural road or dock. Considering the extreme poverty of the local population and the pressure on natural resources, the methodology proposed for the pilot project includes actions that are not limited to transportation, such as facilitating: (i) access to technical assistance in fields such as strategies for the production and marketing of environmentally-friendly local products that have a potential market (type, quality and volume of production), land ownership and tenure, rational land use; (ii) promotion of strategic partnerships to strengthen local organizations and provide technological and financial support for productive projects; and (iii) coordination with other sectors (water, sanitation, education, health care) to respond to the problems that cause extreme poverty in

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<sup>10</sup> Rehabilitation mainly involves patching, graveling or cobbling, small stabilization and grading works, improvement and cleaning of drains and ditches. The roads will not be widened or realigned, no new sections will be built and they will not be paved.

these localities. The first two aspects will receive financial support under the project, while the third requires efforts by the PCR for institutional liaison with other government agencies to coordinate their activities in the same geographic area. The pilot project will include a regional socioenvironmental impact study, whose results will be made public four months before the Bank authorizes bidding on the civil works.<sup>11</sup> The guidelines for the study can be consulted in the program's technical files.

2.18 *Studies and supervision* (US\$7.9 million). Under this component financing will be provided for the technical designs of rehabilitation projects (engineering, environmental, social and financial), as well as supervision of the works. Funding will also be provided for socioeconomic studies (baseline data and impact assessment) and financial and performance audits.

2.19 *Institutional strengthening* (US\$7.8 million). This component is intended to:

- a. Establish, develop, monitor and strengthen the road maintenance microenterprises and their relations with the communities where they are located. As part of the component, an analysis will be performed of maintenance expenses, conditions for setting up MEMVs, integration, return, and performance hiring systems.
- b. Improve the MTC's capacity to plan and establish rural transportation policies, work in conjunction with other institutional players active in areas with a strong impact on the program (decentralization, poverty alleviation), coordinate investments in rural roads inside and outside the ministry and monitor the rural transportation system.
- c. Provide technical assistance for the municipalities in developing provincial transportation plans, management systems for implementing them and mechanisms to finance road management; help the communities to participate in identifying projects and in their operation and maintenance.
- d. Support the identification and structuring of opportunities for local social and economic development (local development window), by establishing an instrument headed by an NGO to coordinate and channel assistance to

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<sup>11</sup> The civil works in the pilot project will only begin when the PCR has performed the following to the Bank's satisfaction, prior to 31 October 2002: (a) made the regional socioenvironmental impact study, the environmental action plan and the indigenous development program public; (b) designed the system to monitor social, economic and environmental impact, which should include community and indigenous participation; (c) agreed on a detailed action framework with the different stakeholders in each area included in the project and identified sources of funding to cover the works and mitigation measures; and (d) reached agreements with the local authorities, other donors and civil society organizations for coordinated and integrated action. Bids for the civil works may not begin prior to 28 February 2003 or until four months have elapsed after the socioenvironmental impact evaluation is published.

communities, individuals and local authorities for identifying, structuring and financing productive initiatives and projects linked to markets where there is demand, through partnerships with suppliers of technical assistance, regional market operators, financial intermediaries, investors and donors. Various civil society organizations will help with the design of the VDL. These organizations include CARITAS of Peru; PRA, an initiative supported by USAID, which seeks to connect rural areas with markets by means of economic and commercial corridors; COPEME, a consortium of 72 NGOs that specialize in providing technical assistance, development, and training in microfinance for SMBs; PACT, an agency that specializes in training NGOs in organizing development projects. At these meetings there was a consensus that CARITAS could be a suitable institution based on its background, institutional capacity, and geographic coverage (it has 48 diocesan organizations involved in participatory processes, evaluation of social needs, and structuring of development initiatives) in order to implement the VDL. The PCR could sign an agreement with CARITAS making the latter responsible for administering the VDL. CARITAS would provide funding, professional experience, and geographic coverage to assist with the operation of the VDL. This subcomponent will have a system for information and periodic monitoring, and may fund other studies.

- e. Procure equipment for the PCR and its zonal units, chiefly vehicles, office equipment, computers, etc.

2.20 *Project administration* (US\$14 million). Includes the operating costs of the PCR and its 11 zonal units.

#### **E. Targets and indicators**

2.21 The logical framework (Annex 1) presents the targets and indicators to be used in monitoring the program. Different types of targets have been included: (i) physical, for execution of works such as routine and periodic rehabilitation and maintenance of rural and secondary roads, improvement of nonmotorized roads, construction of docks; (ii) institutional, for municipal cofinancing of maintenance, establishment of maintenance microenterprises, municipalities able to take charge of maintenance management, technical execution of the contracts entered into by the zonal units; (iii) operational, such as reduction in travel times and costs, growth in demand, expansion and accessibility of the supply of transportation services; and (iv) social and economic, for access to health and education services, justice, agricultural extension services, expansion of markets for the sale of agricultural products.

#### **F. Cost and financing**

2.22 The following table presents the total estimated cost of the program broken down by source of financing. The program will cost US\$151 million, with the IDB and the World Bank each contributing US\$50 million, the Peruvian government

US\$39 million and the municipalities up to US\$12 million, as cofinancing for maintenance.

- 2.23 Given the financial weight of routine maintenance, since stage 2 includes the cost of maintaining the roads that were rehabilitated under stage 1, the program MR expenses covered with government funding will be recognized as counterpart funds. The Bank's participation in financing the MR has helped considerably with developing basic institutional aspects of the road management model that are essential for ensuring its sustainability. In this context, it is proposed that the Bank finance a small share of the routine maintenance (20 percent in 2001 and 2002 and 15 percent in subsequent years).



<b>Cost and financing plan</b> <b>US\$ thousands</b>				
<b>Category</b>	<b>IDB</b>	<b>WB</b>	<b>Local</b>	<b>Total</b>
<b>A. Investment</b>	39,525	39,525	32,265	111,315
Rehabilitation of rural and secondary roads	21,240	21,240	7,620	50,100
Periodic maintenance	7,700	7,700	2,800	18,200
Routine maintenance	5,200	5,200	19,670	30,070
Improvement of nonmotorized roads	2,225	2,225	800	5,250
Pilot project on provincial road management	1,100	1,100	590	2,790
Pilot project on multimodal transport	2,060	2,060	785	4,905
<b>B. Studies and supervision</b>	3,355	3,355	1,210	7,920
<b>C. Institutional strengthening</b>	3,330	3,330	1,185	7,845
Development of road maintenance microenterprises	950	950	335	2,235
Development of a rural transportation policy	300	300	100	700
Municipal road management capacity	1,590	1,590	570	3,750
<b>Local development facility and other studies</b>	280	280	100	660
<b>Equipment</b>	210	210	80	500
<b>D. Administrative costs</b>			14,000	14,000
<b>E. Contingencies</b>	3,290	3,290	2,340	8,920
<b>F. Financial costs</b>	500	500		1,000
Inspection and supervision	500			500
Other		500		500
<b>Total</b>	<b>50,000</b>	<b>50,000</b>	<b>51,000</b>	<b>151,000</b>

### **III. PROGRAM EXECUTION**

#### **A. Borrower and executing agency**

- 3.1 The borrower will be the Republic of Peru. The executing agency will be the MTC, through its Programa de Caminos Rurales (PCR) [Rural Roads Program] which, as in stage 1, will be responsible for administering the loan, establishing standards and criteria for execution, contracting services and works with third parties, transferring funds, providing technical assistance and supervising the municipalities that have the capacity to plan and execute studies and works. The PCR enjoys extensive technical, administrative and financial independence and has zonal units in the departments where the program will be carried out.

#### **B. Execution and administration**

- 3.2 The program will be implemented under a three-tiered arrangement, decentralizing responsibilities and including municipal and community participation as follows:
- a. The central unit of the PCR will be responsible for general program management, which mainly involves: (i) establishing investment programs and indicative budget allocations; (ii) signing participation agreements with provinces with jurisdiction over program areas and channeling funds into trust accounts established with them; (iii) implementing the institutional strengthening and pilot projects; (iv) updating and applying the operations manual; (v) contracting studies, civil works and supervisory services; (vi) preparing progress reports, processing disbursement requests and administering the special account; and (vii) coordinating with other central government agencies.
  - b. The zonal units will be in charge of managing the local programs. This will involve: (i) promoting the program and planning investments in consultation with municipalities and communities; (ii) coordinating poverty mitigation and rural development programs with public and private agencies; (iii) with the support of PCR central unit, issuing calls for and evaluating bids and awarding contracts for engineering studies, works and their supervision, and approving the results; (iv) administering contracts and agreements with municipalities; (v) supervising and presenting reports on execution of the different project components, and (vi) establishing, providing training for, hiring, monitoring, and evaluating the MEMV.
  - c. The municipalities and communities will participate in: (i) identifying subprojects and coordinating investment programs with the zonal units; (ii) contributing to the cost of works and community components with financial resources or labor, equipment or materials; (iii) carrying out works under direct contracts or by contributing remunerated unskilled labor for contracted works; (iv) supervising project execution and reporting on potential problems; and

(v) implementing the *pilot provincial management project*, contracting studies, supervisory services and works, pursuant to prior agreements on inspection, technical control, administrative and financial conditions applicable to the projects to be funded.

- 3.3 The participation agreements between the PCR and the provincial municipalities are central to execution of stage 2 and therefore the program will only finance activities in provinces that have concluded one.<sup>12</sup> The agreements establish the following municipal responsibilities: (i) to execute the works following the procedures established in the program operations manual; (ii) to participate in the institution-building program and carry out the action plans agreed upon with the PCR; (iii) to support the development of road maintenance microenterprises and community-organized rural roads committees; (iv) to open special accounts to guarantee the flow of municipal funds to cofinance routine maintenance; and (v) to set aside budget allocations starting in 2002 for maintaining the roads rehabilitated by the program. In turn, the PCR undertakes to keep the municipalities permanently informed about its activities, provide institutional strengthening in road planning and management, evaluate results and establish a financing mechanism to maintain the rehabilitated roads through a continuous flow of the funds committed under the cofinancing mechanism. The agreements must be supported by the district mayors to ensure their acceptance of the terms, particularly cofinancing for the maintenance mechanism, and to guarantee coordination with local communities.
- 3.4 If a provincial municipality fails to comply, to the Bank's satisfaction, with the obligations set out in the participation agreement, the PCR shall (a) not add any further activities to the municipality's jurisdiction until such time as the latter has taken corrective steps acceptable to the Bank to rectify the situation; and (b) remove the province from its annual program although it will continue to completion any activities already in progress or for which contracts are in force.

### **C. Project selection criteria**

- 3.5 Stage 2 will apply eligibility criteria similar to those in stage 1, since the general thrust of the program will not change. In Peru, where two thirds of the rural population lives in poverty or extreme poverty, investments in rural roads have a strong social component. Therefore, the program stresses social factors among other project selection criteria. During the process, steps will be taken to ensure that each project conforms to the mandate of the Eighth Replenishment regarding

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<sup>12</sup> This means that if a municipality does not comply with the obligations it contracts under its participation agreement to the Bank's satisfaction, the PCR will: (a) not include new activities in that jurisdiction until the municipality has adopted corrective measures that are satisfactory to the Bank; and (b) exclude all activities from its annual program, with the sole exception of activities under way or that have already been contracted.

poverty alleviation The technical and feasibility studies will evaluate the number of poor among the beneficiaries.

- 3.6 There are five main criteria for determining project eligibility – institutional, technical, environmental, social and economic. The institutional criteria refer to the level of identification felt by the communities in the area of influence of a given road project, particularly their interest in contributing to its future maintenance. The technical and environmental criteria refer to the construction features of the proposed projects, the validity of the environmental protection measures and their functionality within the provincial or departmental road system. The program will not finance works in areas declared by law to be environmentally protected or widely recognized as such on account of their sensitivity.
- 3.7 The social criteria refer to the need to integrate the poorest areas into economic and social activities and help to mitigate poverty through job creation.
- 3.8 The financial criteria relate to the profitability of the projects. During preparation, a sample of 36 roads reconditioned during stage one was evaluated in order to determine a rate of return for selecting projects without having to perform a complete cost-benefit analysis. The findings, however, were not conclusive. To accomplish this aim the following methodology is proposed:
  - a. *projects providing access to communities in which poverty is widespread*: a project whose total cost or cost per beneficiary is below a certain threshold (US\$250,000 per project and US\$100 per beneficiary) will be included if it addresses social criteria relating to the infant mortality rate (with a ceiling of 80/1000) and unmet basic needs of the project area (with a ceiling of 70%).
  - b. *projects whose benefits flow from agricultural and livestock production (producer surplus approach)*: for these projects in areas where daily transport is limited and linking poor communities in areas with economic potential, the benefits from road rehabilitation will be linked to future increases in agricultural and livestock production. A project must produce an economic rate of return of at least 10% to qualify. A project that does not meet this requirement must be discarded or its reformulated under less costly technical standards.
  - c. *projects based on savings in terms of vehicle operating costs*: on roads where motorized traffic exceeds 30 vehicles a day, an economic analysis will be undertaken comparing rehabilitation and road maintenance costs with the benefits derived from the savings in vehicle operating costs, following the World Bank *road economic development model* (based on the HDM program). This methodology will be used mainly to sections of secondary road that may be considered critical for connections to networks and between one rural road network and another.

- 3.9 Projects will be selected using the following methodology: (i) the PCR distributes investment funds among the different departments and their provinces, based on explicit criteria whose determining factors are the population, poverty and length of the tertiary system; (ii) the investment plan and timeframe is analyzed together with the local authorities and communities and priority works are identified; and (iii) the final selection of the roads and their technical rehabilitation standard (which determines investment costs) is conditional upon an economic evaluation of the works.
- 3.10 The geographic distribution of funds for stage 2 by department and province has already been determined by the PCR. Economic evaluations performed in accordance with the PCR's standard procedures are available for most of the works to be executed during the first year.

**D. Project operations manual**

- 3.11 To ensure that execution will be consistent, the PCR will implement the program based on an operations manual that clearly establishes the guidelines and procedures it and its zonal units will follow. The manual has been improved in the procedures for the socioenvironmental management of projects, community participation and decentralization of activities to the zonal units and municipalities and has the Bank's nonobjection. Also, it is being expanded to include the procedures for the pilot projects. The expanded version will require the Bank's nonobjection as one of the conditions precedent to the first disbursement. Evaluation of compliance with the manual will form part of the terms of reference of the firm that will audit the technical and operational management of the program.
- 3.12 The manual will establish rules and procedures for program implementation in the areas of: (i) general institutional structure; (ii) disbursement, accounting and auditing procedures and presentation of reports; (iii) procurement processes, distribution of responsibilities and internal controls; (iv) plans for program evaluation and monitoring; (v) procedures for project identification, preparation, approval and supervision, including environmental aspects; (vi) cofinancing of activities with other jurisdictions; and (vii) transfers of funds and monitoring of their application.

**E. Monitoring and evaluation**

**1. Monitoring**

- 3.13 Program monitoring will include the following activities. (i) Semiannual examinations of program results and the annual plans, which the PCR will track continuously. The main indicators are presented in the logical framework. The PCR will also identify other indicators for the same purpose, which will be included in the operations manual, in order to quantify the efficiency and effectiveness of

project execution. (ii) Independent semiannual audits of results to examine physical progress, particularly the quality and cost of the works, compliance with the eligibility criteria and with the procurement, disbursement and environmental procedures established in the operations manual and the indicators. These evaluations will also review the project's accounts and the statements of expenditures by the executing units and other obligations included in the manual. The evaluations will examine activities by the PCR and the zonal units. The PCR will hire a firm to audit technical, environmental and operational management of the program under terms of reference that are acceptable to the Bank, which will perform semiannual evaluations of the program, based on an examination of a sample of projects.

## **2. Semiannual evaluations and reports**

- 3.14 The PCR will prepare quarterly reports on all project components. They will be presented to the Bank within 30 days after the end of each quarter and will describe: (i) progress in the indicators and the disbursement schedule; (ii) updated execution and disbursement schedules for the rest of the project; (iii) compliance with the conditions established in the loan contract; (iv) program of activities and detailed plans of action for the next two quarters; and (v) an evaluation of the problems and main issues arising from program implementation.
- 3.15 Every six months, the IDB, the World Bank and the government will make a joint review of progress in project objectives and execution of the components. Representatives from the zonal units, consultants and NGOs involved in the technical assistance component, the MTC, the MEF, the decentralized agencies involved in the rural development programs and a sample of beneficiaries will participate. The reviews, to be held no later than 31 May and 30 November, will provide an opportunity to evaluate: (i) progress in program execution and achievement of its objectives as reflected in the indicators; (ii) the performance of the PCR and its zonal units; (iii) effectiveness of the program in terms of municipal and community participation, response by local contractors, development of the maintenance microenterprises and coordination with other rural development programs; (iv) experience with the rules and procedures established in the operations manual and decentralization of activities to the zonal units; (v) progress in restructuring and strengthening the management and financing of rural road maintenance; (vi) proposed activities for the following year, with stress on institutional activities and the budget. The program execution schedule and supervision indicators will be updated by mutual agreement during the annual reviews. The PCR will present a report to the Bank no later than two weeks before the arrival of the mission, including the agenda of the meeting, the status of the areas listed above and the plan of action for the following year. If progress is not satisfactory, the government will prepare a corrective plan to the Bank's satisfaction with two months following the meeting.

- 3.16 The PCR will submit to the Bank an annual program of activities after consultations with the municipalities by 30 November of each year starting in 2001, covering: (i) activities and projects to be financed by the program; (ii) justification, implementation period and estimated budget for those activities; and (iii) an annual report on maintenance of the roads rehabilitated in stages 1 and 2. These reports will include the annual budget for maintenance of the tertiary system, estimated municipal contributions, operation of the special accounts, and the results from the technical, institutional and financial standpoints, performance by the microenterprises, etc. The plan of operations for 2002, year one of the program, will be structured based on ratification of the cofinancing agreements by the municipalities and prioritization of roads by communities.

### **3. Ex post and socioeconomic impact evaluations**

- 3.17 The government does not consider an ex post evaluation of the program to be necessary, and the Bank accepts this position. As in phase one, the program will have an evaluation of the socioeconomic impact of the projects and environmental impact audits of the works, since both are necessary to improve its quality. The cost of the evaluations is included in the institutional strengthening studies component. The results of the socioeconomic impact evaluation will be ready in time for the annual mission in November 2003. The document, after revision and incorporation of the Bank's comments, will be presented to the NGOs participating in the program, other government agencies involved in rural development and representatives of the beneficiaries. At that meeting, the following aspects will be examined in particular: (a) progress in the administrative decentralization in the road sector and changes to be made in the program's institutional design; (b) rural road financing policy; (c) quality of coordination among the agencies involved in rural roads; and (d) municipal participation in program execution.

### **4. Program supervision**

- 3.18 The IDB and the World Bank will supervise the project through a joint project team. The project team leaders will coordinate the timetables and make-up of the missions, which will be based on the guidelines used during execution of stage 1 and preparation of stage 2. The missions will supervise the project twice a year. The IDB will appoint its project team leader following its usual procedures for the supervision of operations under way. The Country Office will be in charge of program administration, also based on its usual procedures.

### **F. Procurement**

- 3.19 Contracts for works, goods and consulting services paid for from loan proceeds will follow Bank guidelines. No procurements are anticipated that will require international competitive bidding. The *procurement plan* is attached as Annex 2.

## **1. Civil works**

- 3.20 International competitive bidding will be compulsory for contracts worth more than US\$3 million and for goods and related services costing over US\$250,000. Local competitive bidding following procedures acceptable to the Bank will be used to contract works costing over US\$50,000.
- 3.21 Direct contracting for amounts not over US\$50,000 per contract will be used for the rehabilitation of nonmotorized roads and rural road maintenance with: (i) *rural road committees* for improvements on nonmotorized roads; (ii) *road maintenance microenterprises* established under the program; (iii) *small works contractors*, for works where there is no competition or not enough bidders and it is advisable to award the contract directly, under adequate supervision; and (iv) *municipalities and small works contractors* for periodic and emergency maintenance that requires the intensive use of equipment. The aggregate cost of contracts with municipalities may not exceed US\$3 million. Direct contracting of small works contractors and municipalities for these activities may only be done with the prior authorization of the Bank after the PCR has presented justification.
- 3.22 Procurement of goods will mainly be limited to office equipment, computers and vehicles appropriate for the zones where the program will be active. International competitive bidding will be required for procurements worth more than US\$250,000.

## **2. Consulting services**

- 3.23 International competitive bidding will be compulsory for consulting services costing more than US\$200,000. The consultants will be contracted following established procedures. These services include: environmental and socioeconomic impact studies linked to the program, engineering designs, construction supervision, technical assistance, training courses and services for technical and operational control of project management.
- 3.24 To establish the local development window, the PCR may sign a contract with CARITAS of Peru to manage the facility. CARITAS, for its part, would also contribute financial resources, professional experience and geographic coverage (it has 48 diocesan organizations that are active in participative processes, the evaluation of social needs and the structuring of development initiatives). The agreement would clearly spell out the responsibilities of the parties. Under the arrangement, CARITAS will be a sole-source supplier, and therefore an exception to Bank contracting procedures is requested. The program contribution will amount to US\$560,000, with the Bank providing US\$237,000. Should the PCR opt to use another entity to manage the facility, it will have to adhere to the Bank's standard procedures .



### **3. Procurement review**

- 3.25 All bid processes for civil works over US\$1 million and all procurements will be examined in advance by the Bank. The two initial bid processes conducted by the PCR and the first process by each zonal unit will also be subject to prior examination. In all other cases, the Bank will perform ex post reviews, sampling the supporting documentation for each contract for works. To facilitate the review process, the executing agency will present a list of the works contracted each quarter as an annex to its quarterly reports. Consulting services estimated to cost US\$100,000 or over, all sole-source contracts, and contracts for individual consultants over US\$50,000 will be subject to prior review. For consulting services below those thresholds, only the terms of reference for contracts not envisaged in the program's operations manual will be subject to prior examination. In all other cases, the Bank will perform ex post reviews, sampling the supporting documentation for each consulting contract.
- 3.26 The capacity, recent experience and legal framework governing the PCR's performance during stage I are sufficient to anticipate that it will handle procurements below the thresholds efficiently and reliably. It has sufficient capacity to continue with ex post supervision of such procurements, without the need for external advisory services or specific training. The low thresholds at which prior examination is required will be compensated for in several ways: (i) the firm to be contracted to oversee the program's technical and operational management will perform semiannual evaluations; (ii) the program's information and monitoring system will make it possible to compare the costs of similar projects; (iii) the IDB's and World Bank's administration missions and their Country Offices will undertake periodic reviews and random sampling, frequent visits to the field and examinations of the procurement documentation.

## **G. Bank account, disbursements, accounting and audits**

### **1. Special bank account**

- 3.27 The government will open and maintain a special bank account in United States dollars in a commercial bank acceptable to the IDB, under satisfactory terms and conditions. Deposits in the special account will be limited to 5 percent of the loan (US\$2.5 million). The Bank will replenish this revolving account upon receipt of disbursement requests from the borrower. The PCR will control use of the account and prepare the disbursement requests on behalf of the borrower. These requests, accompanied by justification of the use of the funds, will be presented each month, or earlier, in the event that the account drops below 67 percent of the initial deposit.

## **2. Records and control of disbursements**

- 3.28 The PCR will be responsible for: (i) developing and introducing suitable accounting, financial and internal auditing systems to manage program funds; (ii) organizing the accounting system so that it can identify the sources and uses of project funds, produce the documentation needed to verify transactions and facilitate timely preparation of the consolidated financial statements; (iii) preparing and presenting disbursement requests and justifications of the use of resources and semiannual reports on the revolving fund, to the Bank's satisfaction, consolidating the information provided by the coexecuting agencies; and (iv) preparing the project's consolidated annual statements, to be duly certified by external auditors.
- 3.29 The coexecuting agencies will be responsible for: (i) maintaining specific bank accounts for program funds; (ii) remitting periodically to the PCR the financial information it requires to consolidate the program's statements; and (iii) establishing and maintaining suitable accounting systems and filing systems for the supporting documentation on eligible expenditures and investments under the program.
- 3.30 All payments for goods, works and consulting services will be made by the PCR. If a zonal unit is responsible for the contract, the PCR will make payment after receiving the unit's recommendation and verifying that the contract complies with the Operating Regulations. The supporting documentation (construction and maintenance contracts and agreements, contracts for services, invoices for works performed, etc.) will be approved by the chief of the zonal unit. The PCR will supervise cash management and flows of program funds, conciliation of bank accounts, transactions, disbursements and accounting to and from the zonal units or municipalities during the program.

## **3. Disbursements**

- 3.31 Disbursement requests will include supporting documentation in the following cases: contracts for civil works over US\$1 million, consulting contracts over US\$100,000 and all sole-source contracts. The ex post evaluation method will be used in all other cases, and evaluations will have to be performed at least semiannually. The PCR will present the disbursement requests to the Country Office, consolidating the information it receives from the coexecuting agencies, accompanied by the form "Breakdown of payments and control of disbursements and local contributions" and will ensure that: (i) the information contained in the breakdown is substantiated by the documentation supporting the disbursement requests (contracts, orders, invoices, receipts for payments, certificates of works, suppliers' certificates, certificates of origin and other documents verifying the information given in the breakdown); and (ii) the information is duly identified, suitably filed and available for review by the Bank and the external auditors.

- 3.32 During its technical and financial inspection visits, the Country Office will verify by sampling whether the PCR and the coexecuting agencies have the documentation supporting the disbursement requests on file and whether the funds have been used as stipulated in the loan contract.
- 3.33 The proceeds from the Bank loan will be disbursed on the basis of the following percentages for eligible items: (i) 40 percent of the cost of rehabilitating rural, secondary and nonmotorized roads and of periodic road maintenance; (ii) 20 percent of routine maintenance (and 15 percent in 2003 and 2004); and (iii) 42 percent of consulting services and institutional strengthening. Proceeds from the World Bank loan will be used for the same categories and in the same percentages, under the cofinancing arrangement.

#### **4. Audits**

- 3.34 The PCR will hire a firm of independent public accountants acceptable to the Bank which will perform annual audits of the project's financial statements. The statements will be presented to the Bank during the program within 120 days after the end of each fiscal period. The estimated cost of the financial audits has been included in the studies and supervision component and will be financed with Bank funds.

#### **5. Retroactive financing and cost recognition**

- 3.35 The loan will provide retroactive financing for eligible costs incurred for the program after January 2001. They are a continuation of stage 1 and many of the contracts are for routine maintenance with microenterprises, which means, among other things, that the Bank will examine the procurement process used. It is estimated that the payments made for civil works and consulting services will amount to about US\$5 million. The Bank will recognize up to a total of US\$5 million as counterpart funds.

#### **H. Execution period and disbursement schedule**

- 3.36 The project will be executed in four years counting from 1 January 2001. The prospective loan is expected to be fully disbursed in 4.5 years.

#### **IV. FEASIBILITY AND RISKS**

- 4.1 The program is consistent with the Peruvian government's general poverty mitigation strategy. The government proposes to continue working toward several objectives with the project: (i) to reduce the costs of transportation and make vehicular access more reliable, thereby expanding the markets for agricultural products and other goods; (ii) to link zones with difficult access to regional economic centers; (iii) to improve transportation conditions in small towns; (iv) to create jobs through the rehabilitation and maintenance of rural roads to mitigate rural poverty; and (v) to build up institutional capacity and establish small and medium-sized companies to sustainably provide maintenance and improvements on rural roads.
- 4.2 The program is also consistent with the Bank's strategy for the roads sector, which seeks to reduce transportation costs, increase mobility, facilitate access and improve maintenance as means of achieving greater economic efficiency.

##### **A. Institutional feasibility**

- 4.3 The PCR has a suitable structure for executing stage 2 of the program. Its personnel was technically capable of solving problems that arose during stage 1 and it has sufficient experience to administer the proposed program once the financing is approved. When the program is fully under way, the PCR will have assistance from external consultants and a company that will perform external audits of the technical, administrative and environmental components, providing the executing agency with independent feedback on working methods and their results.

##### **B. Socioeconomic feasibility**

- 4.4 Almost 30 percent of Peruvians live in rural areas. Poverty is particularly widespread in the rural parts of the sierra, where two thirds of households are poor and 47 percent live in extreme poverty. Indigenous groups are much poorer than the rest, since they account for 40 percent of people living in dire poverty and 25 percent of the poor. Health care, sanitation, nutrition and education are quite deficient in some rural areas, owing to traditional regional and ethnic inequalities.
- 4.5 The largest number of people suffering from extreme poverty (about 1.6 million) live in the rural sierra. Per capita income of the rural population is US\$536 a year, while the poverty line established by the Bank is approximately US\$1,584. The difficulty of reducing poverty in the sierra demonstrates the seriousness and stubbornness of economic stagnation in rural Peru.
- 4.6 The program will benefit rural communities in the sierra, with 3.5 million beneficiaries in the 12 departments it covers. They account for about 70 percent of

the total rural population. In these communities, women will benefit greatly from the improvements in rural and nonmotorized roads. It is mostly women who take products to market and more reliable roads will boost their income-earning capacity. Women will benefit proportionally more from better access to social services, such as hospitals and schools.<sup>13</sup>

- 4.7 Thanks to the project's design, rehabilitation and maintenance of rural roads will boost the competitiveness of the goods produced by campesinos and small farmers, who are among the poorest people living in rural areas, as can be seen when the figures for the urban and rural populations are compared. For these reasons, this loan can be classified as a poverty-targeted investment, in function of two criteria: (i) it will benefit the poor in given geographic areas; and (ii) its objective, which is built into its design, is to assist low-income groups. The project includes indicators to quantify the benefits obtained by those groups.
- 4.8 Stage 1 demonstrated that by applying the producers' surplus methodology, a representative sample of 36 projects had an economic rate of return, weighted by the investment cost, of 25 percent and a net present value of US\$20 million or a ratio of roughly 1:1 for each dollar invested in road rehabilitation. Two of the 36 projects were on the borderline and 30 percent had economic rates of return below the minimum of 10 percent. Based on this experience, the methodology for evaluating projects in stage 2 has been adjusted to improve its results (paragraph 3.8).<sup>14</sup> The PCR has 120 qualifying roads for which a technical and environmental feasibility study has been done.

### **C. Technical feasibility**

- 4.9 The rehabilitated roads that were maintained during stage 1 of the program demonstrate that the activities are technically valid solutions. Technical designs are available, including general environmental specifications, that are appropriate for the current condition of the roads and their expected use. The technical quality of the roads will be closely monitored during the project, so that their useful life will be extended through routine and periodic maintenance that is tailored to the individual condition of each road.

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<sup>13</sup> Gender study found that 70% of women surveyed indicated that the program had helped to improve their living conditions, mainly in terms of access to health services, increased local trade, improvements in small livestock, better opportunities for social integration through access to transport services and road safety. The program enabled women to travel further more often and with greater safety.

<sup>14</sup> The document "Evaluación económica de proyectos: un análisis sumario del criterio de selección de proyectos aplicado al CR2", which is available in the program's technical files, presents the results and methodology applied in stage 2.

- 4.10 Because tested practices will be followed, all in accordance with Bank procedures, no difficulties are foreseen in bid processes or contracts for works or the availability of local labor.
- 4.11 Given the nature of the program, the budget will not specifically allocate funds for individual roads. The investment plan for 2001 has been partially established and will be subject to the maintenance cofinancing agreements signed with the municipalities. Subsequently, the semiannual joint missions to monitor the program will examine the plan and the roads to be rehabilitated.

**D. Financial feasibility**

- 4.12 Financial feasibility is ensured by the government's commitment to continue financing the roads sector, the continued use of funds from external donors and a steady contribution of counterpart funds. The counterpart will total US\$51.1 million, with US\$11.9 million coming from municipal contributions to cofinance routine maintenance.
- 4.13 The counterpart will be assigned annually in the MTC's budget, as established in the investment timetable, and represents about 15 percent of the total funds earmarked for the MTC's investment program each year. This is due to a special feature of the joint IDB-World Bank financing, in which each of the Banks classifies the other's contribution as counterpart funds. Accordingly, it is not anticipated that the Peruvian government will have any difficulties in meeting its financial commitments, owing to the low impact of the project on the MTC's budget.
- 4.14 Last, the program is a high priority for the government and was confirmed as such by the Ministries of Transport and Communications and Economic Affairs and Finance. It is not expected that its priority will change in the near future. The board of directors of the World Bank approved the loan to cofinance this operation on 19 June 2001.

**E. Socioenvironmental impact**

- 4.15 Stage 1 brought significant socioeconomic benefits that translated into a better quality of life for the rural population. By rehabilitating and maintaining the rural transportation infrastructure, the project consolidated an integrated and reliable system of roads that facilitated access and reduced travel times for communities to basic social and economic services and linked them to subregional centers, expanding the markets for their farm produce and reducing their sales costs.
- 4.16 The road maintenance microenterprises, formed by campesinos from the communities that the rehabilitated roads run through, are a permanent source of employment and generate new and sustained income, while boosting and diversifying local demand for products and services.

- 4.17 The road works in stage 2, like those in stage 1, will be small in scale, involving the rehabilitation of road beds, without changes in alignment, and improvements to nonmotorized roads. Since the projects involve existing rural roads located in areas where settlement has been consolidated, the risk of indirect impacts is low. Therefore, the potential environmental impact will be direct and small, linked to the construction stage, and can be avoided and controlled by applying the preventive and mitigation measures established in the PCR's technical and environmental guidelines. As part of these guidelines, the program has reviewed its specifications for inclusion in road safety considerations in low traffic roads, particularly for accident prevention at crossings in towns and hamlets. The aspects having to do with worker safety are part of the MEMV training manuals and works contracts.
- 4.18 The pilot project for an intermodal transportation system in the jungle will include a regional socioenvironmental impact study<sup>15</sup> that will establish the framework for sustainable development in which the project will be carried out, ensuring that all the impacts it could have on fragile ecosystems, health, the cultural heritage and the indigenous population and the environmental consequences of an increase in population due to better access have been foreseen and suitably dealt with in the project's design, execution and operation. The design and implementation of the pilot project will require an intensive process of consultation and participation by the beneficiary communities and local governments to build consensus and reach internal agreements on implementing their proposals, including them in an integrated action plan. Another key aspect of the project will be the development and implementation of a system to monitor activities and their socioenvironmental impact, whose results will be used to consolidate methods and procedures for future implementation.
- 4.19 The program's operations manual includes an environmental management system for the projects that suitably integrates the socioenvironmental aspects and contains: (i) terms of reference for conducting the environmental impact studies for the road rehabilitation projects; (ii) an environmental guide for the rehabilitation and maintenance of rural roads; (iii) a technical manual for routine rural road maintenance that includes environmental aspects; (iv) an environmental awareness manual for road rehabilitation and maintenance to support environmental education for local communities and microentrepreneurs; and (v) a manual for the improvement and maintenance of nonmotorized roads, which contains a chapter on environmental protection practices. There is also a manual on the reforestation of unstable slopes that was prepared as part of the environmental strengthening strategy of stage 2, under an agreement between the PCR and the National Watershed Management and Soil Conservation Program (PRONAMACHCS). It will reforest cut slopes and embankments with stability and erosion problems along the rural roads under the responsibility of the road maintenance microenterprises.

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<sup>15</sup> The guides for evaluating the regional socioenvironmental impact of the pilot project for the jungle, which include an indigenous development program, are available in the program's technical files.

- 4.20 When the operation was being prepared, an ex post environmental evaluation of a sample of roads rehabilitated under stage 1 was carried out, which confirmed that the impact is direct and small scale, chiefly associated with the works, and can be avoided or mitigated using known measures that are set forth in the PCR's environmental guides. However, improvements were recommended in the environmental management system and have been included in the operations manual, such as: (i) establishing, as a technical criterion for project eligibility, that the program will not include roads located in areas declared by law to be environmentally protected; (ii) supplementing the environmental guides and manuals with specifications for slope stabilization (reduction of grades, construction of shoulders and reforestation), clearing and disposal of materials from landslides, cleaning and clearing of ditches and the operation and environmental reclamation of quarries, (iii) reviewing the terms of reference for the engineering and environmental studies for the rehabilitation projects to adjust the treatment of slope protection, use and reclamation of quarries, disposal of surplus materials and road signage and safety; (iv) reviewing the technical and environmental specifications for works to include funds for points (ii) and (iii) in their budgets; and (v) including the recommendations of the environmental impact study and the stipulations contained guides, manuals and technical and environmental specifications in the bid documents for the construction and supervision of works and establishing fines and contractual penalties for failure to comply with environmental requirements.
- 4.21 Stage 2 will also include other actions to strengthen the program's environmental management system, such as: (i) contracting an environmental engineer as a member of the PCR's technical team who, apart from monitoring and controlling environmental procedures, will support and train the zonal units in specific aspects of environmental protection in projects; (ii) environmental training for program staff, the monitors who provide technical assistance, and microentrepreneurs; (iii) independent semiannual audits of compliance with the technical and environmental procedures established in the operations manual;<sup>16</sup> and (iv) support for raising the environmental awareness of local governments and communities under the institution-building component.
- 4.22 At the 1 June 1999 meeting of the Committee on Environment and Social Impact (TRG 20-99), it was decided that the program does not require a specific environmental impact analysis.

**F. Impact on poverty**

- 4.23 This operation qualifies as a social equity enhancing project, as described in the indicative targets mandated by the Bank's Eighth Replenishment (document

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<sup>16</sup> The results of the technical and environmental audits of the roads in each municipal jurisdiction will be presented to the local authorities.



AB-1704). Furthermore, this operation qualifies as a poverty-targeted investment (PTI) under the geographic criterion. Stage 2 will maintain the same focus as stage 1, since it will consolidate its presence in the poorest departments and, within them, in the provinces with the highest poverty indexes. The work in pilot provinces to develop comprehensive methodologies for transferring management of rural transportation infrastructure does not invalidate this classification.

## **G. Benefits**

- 4.24 The program has a variety of benefits. The short-term ones stem from the improved access provided by rehabilitated and maintained roads and translate into reduced travel times, a larger and more diversified supply of transportation, lower costs for freight and passengers and better service quality and reliability. These benefits, in turn, translate into easier access to social services (health, education), public services (security, justice), economic and commercial services (access to markets, agricultural extension services, and job prospects), etc. All these benefits have been identified and quantified in the impact evaluation studies conducted for stage 1. The medium-term benefits will include expansion of the productive base, increase in the area under cultivation and new and more varied job opportunities. However, to materialize, these benefits depend on actions beyond the program's control (for example the behavior of farm prices). The indirect environmental impact linked to the expansion of the area under cultivation is small, owing to the land tenure structure and local practices, based on low-productivity manual labor.

## **H. Risks**

- 4.25 The main risk lies in the institutional and financial aspects since the municipalities (provincial and district) are too weak to take charge administratively, and financially of rural road management. The program has developed a participative and gradual approach that permits the municipalities to build up their institutional capacity, so they can gradually shoulder increased responsibility for road management and the costs of routine maintenance. The Policy and fiscal decentralization will be pivotal in mitigating this risk. The program design embodies management methodologies that have been adapted to accommodate the local governments' presently low capacity. A deepening of the decentralization process will also benefit the program.
- 4.26 The environmental and technical risks are linked to the selection of suitable designs and quality control procedures to ensure the durability and preservation of the rehabilitated roads, appropriate attention to environmental impacts, training for supervisory bodies and control over the unit prices of the works. These risks were dealt with satisfactorily in stage 1 and the procedures are being revised in light of the results of the ex post environmental evaluation and included in the operations manual's environmental management system. The environmental risks linked to the pilot project in the jungle will be mitigated by keeping the projects small and

selecting areas that are limited in size, with relatively controlled access, to facilitate the process of monitoring, supervising and controlling activities and reducing exogenous variables that could have cumulative socioeconomic and environmental impacts, thereby increasing the risks associated with the project. Furthermore, the projects and preventive and mitigation measures will be closely monitored to ensure timely and satisfactory execution.

## PERU

### NATIONAL RURAL TRANSPORTATION INFRASTRUCTURE PROGRAM. STAGE TWO (PE-0140)

#### Logical framework and indicators for the rural roads program

Objective summary	Quantifiable indicators	Means of verification	Main assumptions
<p>Improved access for rural populations to social and economic activities and income-generating activities.</p>	<p><b>Within three years after rehabilitation of each road</b></p> <ul style="list-style-type: none"> <li>• Passenger transport and hauling costs for agricultural products fall by 15%.</li> <li>• Travel times are reduced by 40%.</li> <li>• General and commercial traffic (passenger busses, vans and trucks) increases by 30%.</li> </ul> <p><b>By the end of the program</b></p> <ul style="list-style-type: none"> <li>• 3.5 million people benefit from the rehabilitated roads and substantially improved access.</li> <li>• The equivalent of 10,000 temporary unskilled jobs has been created as a consequence of the rehabilitation works.</li> <li>• 5,500 permanent unskilled jobs have been created for road maintenance contracted with 470 microenterprises.</li> <li>• 300 community organizations and microenterprises are involved in local development through income-generating projects identified by the local development window.</li> <li>• Number of visits to health posts in project area increases by 20%</li> </ul>	<ul style="list-style-type: none"> <li>• MTC statistics, records and inspection of transportation services by local governments and a survey of communities and users</li> <li>• Surveys of transportation users and operators</li> <li>• Program information system</li> <li>• Data on contracts for works and routine maintenance and supervision reports</li> <li>• Population censuses</li> <li>• Socioeconomic impact assessment of a sample of beneficiary areas</li> </ul>	<ul style="list-style-type: none"> <li>• Macroeconomic conditions and trade relations are favorable</li> <li>• The government continues to support the policy to reduce poverty and for the project zone</li> <li>• No natural disasters occur in the project zone</li> </ul>
<p>Improved access to a reliable, safe and sustainable and practicable rural roads network</p>	<p>Approximately 15,000 km of rural (tertiary) and departmental (secondary) roads in the 12 departments covered by the program are rehabilitated and subject to sustainable maintenance activities:</p>	<ul style="list-style-type: none"> <li>• Program information system and MTC road inventory</li> <li>• Municipal information system</li> </ul>	<ul style="list-style-type: none"> <li>• Communities and local governments identify project and associated objectives with individual</li> </ul>

Executive summary	Quantifiable indicators	Means of verification	Main assumptions
<p>late demand, rehabilitation and ce, with a clear t of managerial ities.</p>	<ul style="list-style-type: none"> <li>• 12,000 km of roads in stage 1 of the program are under routine maintenance and, if necessary, periodic maintenance.</li> <li>• 3,000 km of roads are rehabilitated and under routine maintenance in stage 2 of the program.</li> <li>• All the provincial and district municipalities that benefit from the program participate in cofinancing the cost of routine maintenance.</li> <li>• A growing number of municipalities take responsibility for road planning and road maintenance management.</li> <li>• At least 12 municipalities take full responsibility for road management, including the administration of project resources.</li> <li>• 470 road maintenance microenterprises maintain the roads in practicable condition, under contract.</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluation of results performed semiannually by an independent technical auditor</li> <li>• MEF information on fiscal transfers from the Municipal Compensation Fund</li> <li>• Agreements on the transfer of execution responsibilities signed with associations of municipalities</li> </ul>	<p>regional progress.</p> <ul style="list-style-type: none"> <li>• The municipalities su maintenance manage system and take resp for cofinancing the r</li> <li>• The municipalities w charge of road manag devoting technical ar resources to it.</li> <li>• The government supp transfer of program f managed by local go</li> </ul>
<p><b>Components:</b></p> <p>ilitation of rural ondry roads</p> <p>re and periodic maintenance</p> <p>ilitation of torized roads</p> <p>roject for cial road ement</p> <p>roject for odal transport ngle</p>	<p><b>By the end of stage 2 of the program:</b></p> <ul style="list-style-type: none"> <li>• 3,225 km of rural roads are rehabilitated and easily practicable.</li> <li>• 300 km of secondary roads are rehabilitated and easily practicable.</li> <li>• 15,000 km of roads are under continuous routine maintenance.</li> <li>• 6,500 km of roads rehabilitated during stage 1 retain similar levels of practicability as when they were rehabilitated thanks to periodic maintenance.</li> <li>• 3,100 km of nonmotorized roads are rehabilitated, with the participation and support of beneficiary communities.</li> </ul>	<ul style="list-style-type: none"> <li>• Program information system and MTC road inventory</li> <li>• Municipal information</li> <li>• Periodic evaluations of results by an independent consultant</li> <li>• Certificates that the works conform to the technical specifications established in the program's operations manual, issued by the supervisor</li> <li>• Periodic reports by IVP-Arequipa</li> </ul>	<ul style="list-style-type: none"> <li>• No security problems hamper execution of</li> <li>• The local construction has technical, financi human resources to s program.</li> <li>• The public and the lo authorities support th establishment of mai microenterprises.</li> <li>• The communities are in participating and c resources.</li> </ul>

Executive summary	Quantifiable indicators	Means of verification	Main assumptions
	<ul style="list-style-type: none"> <li>150 km of roads are rehabilitated and maintained with financial assistance from the program, under direct management by the provincial and district authorities in the province of Arequipa and its Provincial Roads Authority (IVP).</li> <li>Six small docks have been built and 125 km of rural roads and 140 km of nonmotorized roads have been rehabilitated, linking settlements to the docks.</li> </ul>	<ul style="list-style-type: none"> <li>Progress reports on the multimodal pilot project</li> </ul>	<ul style="list-style-type: none"> <li>The zonal units receive funds from the PCR in decision-making, technical and administrative activities.</li> <li>Cofinancing mechanism in place.</li> </ul>
<p><b>Local development component:</b></p> <p>Strengthening of road maintenance policies and management of microenterprises. Strengthening of the PCR's capacity to develop road management and maintenance policies in coordination with municipalities. Strengthening of the PCR's capacity to coordinate with municipalities in road management and maintenance and to ensure community participation in the identification, prioritization, implementation and monitoring of rehabilitated roads.</p>	<p><b>By the end of the program:</b></p> <ul style="list-style-type: none"> <li>470 microenterprises have routine maintenance contracts based on results.</li> <li>Satisfactory practices for contracting and financing rural roads implemented by the municipalities.</li> <li>MTC/PCR keeps its policies and strategies for intervention in rural road management permanently up to date as a result of on-going evaluation of project impacts and of local needs and capacity.</li> <li>All the beneficiary municipalities participate to an increasing degree in cofinancing and management of rehabilitated roads. The municipalities have contributed at least US\$12 million as local counterpart.</li> <li>12 municipalities have the capacity to fully execute the project components. They all manage their own resources and funds transferred by the program, in accordance with the operations manual.</li> <li>Mechanism for guaranteeing the transfer of funds for road maintenance agreed upon by the central and local governments.</li> <li>All the participating provincial municipalities have adopted institutional programs (provincial road and transportation plans) designed under the frame of the project.</li> </ul>	<ul style="list-style-type: none"> <li>PCR information system</li> <li>Register of microenterprises, contractors and consultants kept by the PCR</li> <li>Evaluation of the results of the institutional development component performed by an independent consultant</li> <li>Agreements on execution and transfer of responsibilities to municipalities</li> <li>Municipal training workshops and rural transportation plans in effect</li> <li>Program evaluation through participatory methods ensures that the opinions of the communities are taken into account</li> <li>Evaluation report by the coordinator of the local development window</li> </ul>	<ul style="list-style-type: none"> <li>The government maintains a policy to permit municipalities to manage funds that comply with given parameters to manage funds.</li> <li>The municipalities are in actively participating in technical-assistance programs.</li> <li>The system of government transfers and sources of income is in effect.</li> <li>The municipalities are able to cofinance rural road management under program arrangements to participate in the institutional development component.</li> <li>Greater flexibility in transfers through the Compensation Fund to municipalities sufficient to local funds to support program's cofinancing mechanism.</li> </ul>

Brief summary	Quantifiable indicators	Means of verification	Main assumptions
	<ul style="list-style-type: none"> <li>• Systems for program monitoring and evaluation by communities permit them and the local authorities to keep abreast of the medium-term results and impacts.</li> <li>• The local development window has been established with participation by and under the management of civil society, donors and government agencies.</li> <li>• 300 community organizations and microenterprises are involved in the local development initiative and income-generating projects through the window.</li> </ul>		
<p>of works and services for:</p> <p>ilitation of rural</p> <p>ondary roads</p> <p>c and routine</p> <p>nance of rural</p> <p>ondary roads</p> <p>ement of</p> <p>torized rural</p> <p>project for the</p> <p>stration of</p> <p>cial roads</p> <p>project for the</p> <p>l development</p> <p>ement in rural</p> <p>rtation policies</p> <p>ategies</p>	<p><b>Input: budget by component</b></p> <p>US\$61.8 million</p> <p>US\$51.9 million</p> <p>US\$5.7 million</p> <p>US\$3 million</p> <p>US\$5.2 million</p> <p>US\$1.4 million</p>	<ul style="list-style-type: none"> <li>• Program implementation plan</li> <li>• Program administrative records</li> <li>• Independent audits</li> <li>• Semiannual progress reports</li> <li>• Periodic program monitoring meetings</li> </ul>	<ul style="list-style-type: none"> <li>• The PCR and its zona the institutional capac resources to carry out activities.</li> <li>• The program's admin procedures allow for execution.</li> </ul>

Brief summary	Quantifiable indicators	Means of verification	Main assumptions
Improvement in the living and administration of rural communities	US\$3.7 million		
Construction of community road	US\$2.8 million		
Promotion of small enterprises Strengthening of local capacity to take part in and economic development Initiatives	US\$700,000		

**PROCUREMENT PLAN**  
**IN US\$ THOUSANDS**

Spending category	No. of contracts	Financing			Method
		IDB	PT/ others	Total	
<b>Works</b>					
Rehabilitation of rural and secondary roads	150	21,240	28,86	50,10	LCB
Routine maintenance	600	5,200	24,87	30,07	DC
Periodic maintenance	150	6,428	8,77	15,20	LCB
Periodic maintenance	60	1,272	1,72	3,00	DC
Improvement of nonmotorized roads	120	2,225	3,02	5,24	DC
<b>Provincial road management pilot project</b>					
Rehabilitation of rural and secondary roads	6	940	1,41	2,35	LCB
Routine maintenance	2	14	81	95	DC
Designs and supervision of works	12	146	199	345	LCB
<b>Intermodal transportation pilot project in the jungle</b>					
Rehabilitation of rural and secondary roads	8	1,272	1,72	3,00	LCB
Improvement of nonmotorized roads	8	140	235	375	LCB
Docks	6	140	190	330	LCB
Impact evaluation	4	169	231	400	LCB
Plan of action	6	339	461	800	LCB
<b>Consulting services</b>					
Design of rural and secondary roads	60	776	1,05	1,83	LCB
Design of nonmotorized roads	120	532	724	1,25	DC
Supervision of works	120	1,818	2,47	4,29	LCB
Technical and management audits	1	85	115	200	ICB
Impact evaluation	3	102	138	240	LCB
Establishment of maintenance microenterprises	3	140	190	330	LCB
Technical assistance for PCR	8	339	461	800	LCB
Technical assistance for municipalities	30	1,525	2,07	3,60	LCB
Training NGOs/PCR/microenterprises/ municipalities	3	64	86	150	LCB
Local development window	1	237	323	560	DC
<b>Goods</b>	5	212	288	500	LCB

ICB = international competitive bidding; LCB = local competitive bidding; DC = direct contracting

Goods include the purchase of vehicles, office equipment and computers

PT: Public Treasury



**PROPOSED RESOLUTION**

**PERU. LOAN \_\_\_\_/OC-PE TO THE REPUBLIC OF PERU  
(National Rural Transportation Infrastructure Program – Stage II)**

**The Board of Executive Directors**

**RESOLVES:**

That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such contract or contracts as may be necessary with the Republic of Peru, as Borrower, for the purpose of granting it a financing to cooperate in the execution of the National Rural Transportation Infrastructure Program – Stage II. Such financing will be for an amount of up to fifty million dollars of the United States of America (US\$50,000,000) from the Single Currency Facility of the Ordinary Capital resources of the Bank, and will be subject to the "Special Contractual Conditions" and the "Financial Terms and Conditions" of the Executive Summary of the Loan Proposal.