1. Country and Sector Background

Nicaragua is one of the poorest countries in Latin America and had a GDP per capita of US$750 in 2003. It has been estimated in the 2003 Living Standards Measurement Survey (LSMS) that some 46 percent of the population lives below the poverty line, while 15 percent lives in extreme poverty. The incidence of poverty is more than twice as high in rural areas (68 percent) as in urban areas (31 percent). While Nicaragua’s social indicators are generally comparable to those observed in other low income countries, it stands out by having a relatively high population growth rate and low education attainment levels. Additionally, in October 1998, Nicaragua was struck by hurricane Mitch, which caused major human and physical damage, especially to the road network.

The Government of Nicaragua (GON) designated poverty reduction as one of its priorities, and endorsed the HIPC initiative and the Poverty Reduction Strategy (PRSP) prepared in 2001 by the previous administration. In so doing, it took on a great number of challenges in 2002 as it inherited a rather difficult economic situation, and was forced to apply a number of stringent measures in order to arrive at an agreement with the IMF. Despite this adverse economic climate, Nicaragua made significant progress, notably its achievement of the Highly Indebted Poor Countries (HIPC) initiative completion point in December 2003, which as a result will help to reduce the unsustainable foreign debt burden which Nicaragua bore. Its debt service will be reduced to a third of what it currently pays; but it remains considerable at 9%\(^1\) of the value of its exports.

\(^{1}\) The debt service would have remained at 24% of the exports without HIPC
The GON has decided further to focus on economic growth as its vehicle for poverty reduction. It recognized also that a solid public-private partnership is an essential element in this strategy. It consequently designed a National Development Plan (NDP), based on the PRSP, whereby it seeks to emphasize: (i) broad based economic growth and structural reform, and (ii) good governance and institutional development.

The broad based economic growth sought through the NDP, is based on enhancing Nicaragua’s economic competitiveness given its geographical position with respect to its main trading partners and its insertion into the global economy through recent free trade agreements. The associated strategy is based on four fundamental aspects: (i) direct support to the enterprise sector, (ii) attraction of direct foreign investment, (iii) social inclusion through the development of human capital, (iv) and investment in critical productive infrastructure.

The Bank has recently completed a Development Policy Review (DPR) for Nicaragua (Report Number 29115-NI of December 3, 2005). The DPR’s analysis of the determinants of growth identified public infrastructure development as a key for sustaining growth in Nicaragua. Of all the growth determinants considered, it yielded the greatest growth pay-off in simulations that consider the implementation of more aggressive reforms compared to the outcome projected if Nicaragua was to continue to evolve according to historical trends. This means that Nicaraguan authorities need to focus on strategies for reducing the country’s road infrastructure deficit. Other Bank analytical work such as the 2004 Investment Climate Assessment (ICA) conformed this evaluation.

However, according to the DPR, Nicaragua lies in the lowest range in Central America for the density of paved roads (10% in comparison to the Central American average of 29%), the region being itself less endowed than countries with similar level of development (31%). Overall, Nicaragua remains the least well endowed country in terms of infrastructure in the Region, given that only 22% of the population have access to a paved road, and only around 20% of the network is in good or fair condition.

The quality of road infrastructure is the lowest in Central America. According to the Ministry of Transportation and Infrastructure (MTI), more than 75 percent of the total road network in Nicaragua is in poor condition; this however represents a considerable improvement during the last five years as conditions used to be decidedly worse. The trunk and collector roads have now been mostly restored to good condition but the overall poor figure is due particularly to the abysmal condition of the other categories (secondary, tertiary and unclassified roads) which together represent 87 percent of the total network. This largely reflects the use of inappropriate design and construction standards coupled with the inadequate maintenance regime that have in turn resulted in premature road deterioration. These findings suggest that the poor quality of roads, rather than their availability, is the principal bottleneck in this sub-sector. Also, Nicaragua has very limited transport modal choices. Its seaports are run down, the domestic air transport system is in an infant state of development, and its railroad system has ceased to exist. The most important transport bottlenecks in Nicaragua therefore lie in the roads sector.

3 Values for 1999, with per capita GDP between 2000 and 4000 USD PPP in 1999.
2. Objectives

The overall objective of the project would be to support the GON’s broad based economic growth and poverty reduction plan by relieving transportation bottlenecks that currently hinder economic growth and private sector investment. The specific objectives are to support economic growth by (i) expanding and complementing the previous focus on trunk roads by improving a connecting network of secondary and rural roads which will be selected in a manner that would lead to the creation of paved distributor networks (circuitos de distribución) that can better support economic activities of a given productive zone; (ii) helping ensure the sustainability of the road improvements, through strengthening of maintenance practices, and (iii) institution building in the Ministry of Transportation and Infrastructure (MTI) and the Road Maintenance Fund (FOMAV). The achievement of the project’s objectives will be measured by the: (i) reduction in vehicle operating costs and time savings; (ii) qualitative improvements to the network in terms of the km of roads assessed as being in good or fair condition; (iii) extent of the participation of the private sector in road rehabilitation and maintenance programs as measured in terms of the numbers and value of contracts awarded; (iv) adequate funding and implementation of road maintenance; and (v) number of communities provided with improved road access to social, educational and economic centers.

3. Rationale for Bank Involvement

The International Development Association (IDA) involvement for improving of sector planning and expenditure management is essential as both the provision and maintenance of infrastructure leave a lot to be desired in Nicaragua. This was due to various factors in the recent past, especially inadequate maintenance funding levels, a weak construction industry and poor operations of service companies. In recent years, IDA has maintained a high level dialogue with the Authorities on these issues, especially on the budgetary and other funding mechanisms for maintenance, the need to improve the institutional framework, and on the advantages of increased private sector participation in infrastructure construction, operation and maintenance to the extent feasible. The poorly maintained road network places the major investments of the past 5 years at risk and prevents the development of least-cost transport services, especially in rural areas. Full establishment of the FOMAV and the use of private contractors that are awarded contracts via a public bid process could be a major part of an efficient solution to this problem.

Furthermore, the increased regional competitiveness that is expected to arise from the recent Central America Free Trade Agreement (CAFTA) agreement also heightens the urgency to address the road infrastructure deficit. A well developed and maintained road network is essential to maximizing Nicaragua’s potential for dynamic, export led economic growth. To improve its prospects for competing under CAFTA, Nicaragua must overcome the huge backlog of maintenance and investment in road infrastructure. The allied agenda of policy and institutional change in this sector will involve: (i) improving the quality of rural roads and ensuring year-round rural accessibility. Such road improvements should be part of a strategy aimed to strengthen rural-urban linkages and to foster commerce and agricultural development; (ii) designing mechanisms to protect infrastructure investments from bearing a disproportionate share of the burden of periodic fiscal adjustments and conversely to increase investments if fiscal
space allows it; (iii) promoting a suitable regulatory framework for private sector participation in the construction, operation and maintenance of transport infrastructure, and (iv) improving urban transportation systems.

4. Description

The project would enhance IDA’s ongoing support for a) capacity building and institutional strengthening of MTI, b) the design and implementation of routine and periodic maintenance programs, and c) full operational establishment of the FOMAV. The project would support the improvement of some connector roads between the Panamerican highway and the Pacific coast as well as the stabilization of about 320km of secondary and rural roads. The balanced technical approach would continue along the same lines as the previous IDA projects, ensuring and emphasizing sustainability of all road improvements by capacity building and institutional support, and implementation of routine and periodic maintenance programs via microenterprises and private contractors for about 2,480km of roads. The project would also help the MTI to advance its program of decentralization of the road network and to provide the impetus for restoring fines for truck overloading to appropriate levels.

5. Financing

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<th>Source</th>
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<tr>
<td>BORROWER/RECIPIENT</td>
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6. Implementation

The project will be carried out by the same MTI unit that has managed the previous IDA projects very well. Although MTI will retain overall project responsibility, it will prepare an agreement with the FOMAV that is acceptable to the IDA for the implementation of the road maintenance program. This agreement will first cover the transition of the management of the routine maintenance by microenterprise program to the FOMAV by end of 2007. Subsequently, by mid 2008 the MTI/FOMAV agreement will include also the periodic maintenance program.

IDA has gained significant experience in the sector in the past years having carried out three projects previously. The continuity of this intervention in itself would bring great benefits as most reforms require time to be well implemented. In the case of Nicaragua, the balanced approach between investment and sustainability, through the enhancement of maintenance microenterprises and the continued support to the FOMAV will help to ensure the overall program sustainability. The focus of this and previous IDA projects on maintenance was a determining factor in support of the GON’s recently successful efforts to secure parliamentary approval of the reform to the FOMAV law required to secure its financing. Secondly, IDA is the only agency that developed rehabilitation of secondary roads through stabilization with *adoquines* (small paving stones), acquiring a significant amount of experience of the whole
process. This work has had a great impact and the GON wishes to develop it further and will do so under projects financed by IDA credits and by other donors including the Millennium Challenge Corporation (MCC). Thirdly, through previous projects, IDA has helped to strengthen the MTI’s capacity for planning, social and environmental analyses, and also improved the framework for stable growth of the local construction, contracting and consulting industries through transparent procurement procedures and introduction of road maintenance by contract management.

7. Sustainability

Sustainability will be enhanced through the strengthening of the MTI and the FOMAV, given the emphasis to be placed on planning and on developing adequate arrangements for road maintenance. The physical investments financed by the project (roads in particular) should receive adequate maintenance in order to be sustainable. The Government has taken a major step forward in this direction by approving the modest fuel surcharge needed to fund the maintenance program of the FOMAV that covers the core network. Some budgetary allocations will still be needed by MTI for maintenance of seasonal roads and other less trafficked sections of the network.

Given the advances made in terms of funding arrangements, priority will now be accorded to ensuring that the planning and implementation of maintenance, especially by contracts with micro-enterprises and private contractors, is carried out in an efficient and transparent manner. The MTI has so far done very well in terms of the establishing of 33 routine road maintenance micro-enterprises and managing their performance successfully. The challenge during project implementation will be to complete the transfer of this program to the FOMAV (as originally contemplated by the IDA) and to expand it to about 40 micro-enterprises.

Other factors affecting sustainability of road infrastructure, such as the control of vehicle overloading will also be addressed. This will include initiatives to restore fines for overloading to appropriate levels as well as to enforce them by expanding the use of mobile weigh stations along high traffic routes. The project will also include funds for continued training and technical assistance for the strengthening of MTI and FOMAV staff that was begun under the previous IDA projects. The goal will be to help develop sound planning, investment, management and maintenance procedures for both institutions.

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

According to the Bank’s study on the rural drivers of growth in Central America, education and infrastructure (particularly rural roads) were the first two pre-requisites that need to be provided to rural households in order stimulate economic growth and reduce poverty. The study concludes that infrastructure development may both raise growth and lower income inequality, thus implying that it may be a key win-win ingredient for poverty reduction. Infrastructure development will be pro-poor if it allows poorer individuals (especially in rural areas) to access

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4 Drivers of Sustainable Rural Growth and Poverty Reduction in Central America, ESSD, 2003
additional productive opportunities. Furthermore, the 2006 WDR also reinforces the importance of the role played by infrastructure for promoting growth with equity scenarios.

The applicable lessons learned from the ongoing projects and the experience of other donors who have been active in the transport sector, especially the Nordic Fund, DANIDA, and the Inter-American Development Bank (IDB), indicate that despite the Governments’ typically overriding desire to rehabilitate as many roads as possible, emphasis should be placed on designing a balanced program that focuses on the sustainability of the investments. The main elements of sustainability are (i) improving the planning, programming, implementation and financial sustainability of road maintenance; (ii) ensuring that attention is paid to safety and environmental issues in the sector; (iii) supporting the line agencies in adapting to changed roles in a policy environment of decentralization and of greater private sector involvement; and (iv) promoting the development of the local construction industry.

Since the 1990s the focus of investments in roads has rightly been on restoring the most heavily trafficked sections of the road network. Hence, given the projects completed or underway, by early 2006 most of the trunk roads linking Managua to Honduras in the North, to Costa Rica in the South, to the port of El Rama in the East and to Corinto port in the West have been rehabilitated. Subsequently, to better serve households and industry and to bolster economic competitiveness it has become necessary to invest in improvements to the secondary and rural roads, defined as the distributor network, connected to the trunk roads and that serve the locations where most products start and complete their journeys.

9. Safeguard Policies (including public consultation)

The project is for road improvements along existing road alignments and does not involve major earth works or land acquisition. None of the road candidates involve crossing through protected areas or other environmentally sensitive zones. Based on the specific environmental and social analyses completed so far and the modest scope of the improvements to be carried out, and its similarity to the previous three projects, the project was rated as a category B. The MTI already has acceptable manuals of practice for ensuring compliance with Bank safeguard requirements.

Based on the analyses completed and the scope of the road improvement, no involuntary resettlement is expected. In terms of Cultural Property the MTI Manuals include chance-find procedures although, given the minor earthworks involved, this policy is not expected to be triggered. In terms of Natural Habitats and Forests policies, based on the assessments carried out and the project scope, no adverse impacts are expected. However, in the remote eventuality, the screening procedures to be followed under the project would help to ensure that appropriate actions are taken to mitigate any negative impacts.
Safeguard Policies Triggered by the Project

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<th>Policy</th>
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<td>Projects on International Waterways (OP/BP/GP 7.50)</td>
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</tr>
</tbody>
</table>

10. List of Factual Technical Documents

Project Implementation Plan

Manual de Operaciones del Cuarto Convenio de Crédito, MTI.

Bank Staff Assessment

1. Assessment of Agency’s Capacity to Implement Project Procurement.
2. Financial Management Assessment.
3. Evaluación Técnico - Económica del los Caminos no Pavimentados del las zonas de competitividad de la zona I, II y IV.

Other

3. Normas Ambientales Básicas para la Construcción Vial (NIC-2000); MTI, Unidad Ambiental.
5. Estudio Ambiental-Social: Rehabilitacion y Mejoramiento de la Carretera Diriaamba-Empalme La Boquita-Casares (INCOSA, January 2006).
7. Fichas Ambientales y de Categorización de Proyectos de Rehabilitación y Adoquinado (MTI-DGA, January 2006)
8. Programa de Capacitación con el IV Convenio de Crédito, MTI, Managua, Setiembre del 2005

11. Contact point
Contact: Emmanuel A. James
Title: Task Manager
Tel: (202) 458-2585
Fax:
Email: Ejames1@worldbank.org

12. For more information contact:
The InfoShop
The World Bank
1818 H Street, NW
Washington, D.C. 20433
Telephone: (202) 458-5454
Fax: (202) 522-1500
Web: http://www.worldbank.org/infoshop