

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

## **NICARAGUA**

### **TRANSPORT SECTOR SUPPORT PROGRAM II**

**(NI-L1052)**

#### **LOAN PROPOSAL**

This document was prepared by the project team consisting of Alfonso Salazar (TSP/CNI), Project Team Leader; Luis Uechi (INE/TSP), Alternate Team Leader; Caterina Vecco (INE/TSP); Alejandro Gómez (TSP/CDR); Brenda Álvarez and Juan Carlos Lazo (FMP/CNI); Gabriela Regojo (LEG/SGO); Carolina López (CID/CNI); and Denis Corrales (VPS/ESG).

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|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>REQUIRED</b>  |                                                                                                                                                                                                                                                                                                                                                 |
| 1.               | Program Execution Plan/Annual Work Plan<br><a href="http://idbdocs.iadb.org/WSDocs/getDocument.aspx?DOCNUM=37048213">http://idbdocs.iadb.org/WSDocs/getDocument.aspx?DOCNUM=37048213</a><br><a href="http://idbdocs.iadb.org/WSDocs/getDocument.aspx?DOCNUM=37098801">http://idbdocs.iadb.org/WSDocs/getDocument.aspx?DOCNUM=37098801</a> (PDF) |
| 2.               | Monitoring and Evaluation Plan<br><a href="http://idbdocs.iadb.org/WSDocs/getDocument.aspx?DOCNUM=37044589">http://idbdocs.iadb.org/WSDocs/getDocument.aspx?DOCNUM=37044589</a>                                                                                                                                                                 |
| 3.               | Environmental and Social Management Report (ESMR)<br><a href="http://idbdocs.iadb.org/WSDocs/getDocument.aspx?DOCNUM=37024645">http://idbdocs.iadb.org/WSDocs/getDocument.aspx?DOCNUM=37024645</a>                                                                                                                                              |
| 4.               | Procurement Plan<br><a href="http://idbdocs.iadb.org/WSDocs/getDocument.aspx?DOCNUM=37199701">http://idbdocs.iadb.org/WSDocs/getDocument.aspx?DOCNUM=37199701</a> (Excel)                                                                                                                                                                       |
| <b>OPTIONAL</b>  |                                                                                                                                                                                                                                                                                                                                                 |
| 1.               | Cost and Economic Feasibility Analysis<br><a href="http://idbdocs.iadb.org/WSDocs/getDocument.aspx?DOCNUM=37043247">http://idbdocs.iadb.org/WSDocs/getDocument.aspx?DOCNUM=37043247</a>                                                                                                                                                         |
| 2.               | Analysis of technical design options<br><a href="http://idbdocs.iadb.org/WSDocs/getDocument.aspx?DOCNUM=37043328">http://idbdocs.iadb.org/WSDocs/getDocument.aspx?DOCNUM=37043328</a>                                                                                                                                                           |
| 3.               | Analysis of institutional capacity and other implementation matters<br><a href="http://idbdocs.iadb.org/WSDocs/getDocument.aspx?DOCNUM=37048379">http://idbdocs.iadb.org/WSDocs/getDocument.aspx?DOCNUM=37048379</a>                                                                                                                            |
| 4.               | Environmental and social management framework (ESMF)<br><a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35311344">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35311344</a>                                                                                                                                           |
| 5.               | Training manual for implementation of the ESMF<br><a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36169939">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36169939</a>                                                                                                                                                 |
| 6.               | Assessment of institutional capacities for procurement (MTI)<br><a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35311918">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35311918</a>                                                                                                                                   |
| 7.               | Assessment of institutional capacities for procurement (FOMAV)<br><a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35311924">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35311924</a>                                                                                                                                 |
| 8.               | Nicaragua's road network 2011<br><a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37047013">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37047013</a>                                                                                                                                                                  |
| 9.               | Project map<br><a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37047283">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37047283</a>                                                                                                                                                                                    |

## ABBREVIATIONS

|         |                                                                                                            |
|---------|------------------------------------------------------------------------------------------------------------|
| DCM     | Dirección de Caminos Municipales [Municipal Roads Bureau]                                                  |
| DCV     | Dirección de Conservación Vial [Road Maintenance Bureau]                                                   |
| DGA     | Dirección de Gestión Ambiental [Environmental Management Bureau]                                           |
| DGP     | División General de Planificación [General Planning Division]                                              |
| EIRR    | Economic internal rate of return                                                                           |
| ESMF    | Environmental and Social Management Framework                                                              |
| FMP/CNI | Operational Financial Management and Procurement Services Office in the Bank's Country Office in Nicaragua |
| FOMAV   | Fondo de Mantenimiento Vial [Road Maintenance Fund]                                                        |
| ICAS    | Institutional Capacity Assessment System                                                                   |
| IRI     | International Roughness Index                                                                              |
| MHCP    | Ministry of Finance                                                                                        |
| MTI     | Ministry of Transport and Infrastructure                                                                   |
| PCU     | Coordination Unit for IDB-financed Projects                                                                |
| PRM     | Project Risk Management                                                                                    |
| TSP     | Transport Division (IDB)                                                                                   |
| TSSP    | Transport Sector Support Program                                                                           |

## PROJECT SUMMARY

### NICARAGUA TRANSPORT SECTOR SUPPORT PROGRAM II (NI-L1052)

| Financial Terms and Conditions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                |                                         |                              |                                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------------------------------------|------------------------------|--------------------------------------------------------------------------------------------------------|
| <b>Borrower:</b> Republic of Nicaragua                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                |                                         | <b>OC</b>                    | <b>FSO</b>                                                                                             |
| <b>Executing agency:</b> Ministry of Transport and Infrastructure (MTI) and Road Maintenance Fund (FOMAV)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                | Amortization period:                    | 30 years                     | 40 years                                                                                               |
| <b>Source</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>Amount</b>  | Disbursement period:                    | 5 years                      | 5 years                                                                                                |
| IDB (Ordinary Capital)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | US\$19,600,000 | Grace period:                           | 5.5 years                    | 40 years                                                                                               |
| IDB (FSO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | US\$19,600,000 | Interest rate:                          | LIBOR                        | 0.25%                                                                                                  |
| Local                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | US\$1,318,000  | Inspection and supervision fee:         | **                           | N/A                                                                                                    |
| Total                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | US\$40,518,000 | Credit fee:                             | **                           | N/A                                                                                                    |
| Project at a Glance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                |                                         |                              |                                                                                                        |
| <b>Project objective:</b><br>The general objective of the Program is to make road transport in Nicaragua more efficient in order to stimulate economic activity and contribute to the well-being of the population, while facilitating integration of the country's regions with the rest of Central America. The specific objectives are: (i) to reduce vehicle operating costs; (ii) to increase travel speeds; (iii) to reduce traffic disruptions; (iv) to reduce accident rates; (v) to foster road infrastructure maintenance; and (vi) to reduce the road network's vulnerability to climate change.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                |                                         |                              |                                                                                                        |
| <b>Special contractual conditions:</b> (a) <b>precedent to the first disbursement of the loan proceeds:</b> (i) signature of an execution agreement between the Ministry of Finance (MHCP) and the Road Maintenance Fund (FOMAV) for executing Component 5, road maintenance (paragraph 3.8); (ii) update and entry into force of the program's Operating Manual, with the Bank's no objection (paragraph 3.2); and (iii) agreement with the Bank on an action plan for institutional strengthening (paragraph 1.17) (b) <b>during execution:</b> (i) before tenders are called for any of the works, the MTI and FOMAV will each commission a technical and environmental audit to assess the designs, verify economic feasibility, and monitor execution until final acceptance of each project (paragraph 2.6); (ii) before tendering begins, the documentation established in the program's Operating Manual for each of the works under Component 1 (improvement of rural roads and the trunk network) and Component 5 (road maintenance) will be presented to the Bank for its no objection (paragraph 2.7); (iii) works financed from the project will comply with the Environmental and Social Management Framework (ESMF) included in the program's Operating Manual (paragraph 2.3); (iv) maintenance of all the road works financed by the project is to remain under the responsibility of FOMAV, which undertakes to present the respective annual reports until four years after the last disbursement (paragraph 2.9); and (v) MTI and FOMAV, as the executing agencies, will implement the action plan for institutional strengthening agreed upon with the Bank (paragraph 1.17). |                |                                         |                              |                                                                                                        |
| <b>Exceptions to Bank policies:</b> None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                |                                         |                              |                                                                                                        |
| <b>Project consistent with country strategy:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>  |                                                                                                        |
| <b>Project qualifies as:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                | SEQ <input type="checkbox"/>            | PTI <input type="checkbox"/> | Sector <input type="checkbox"/> Geographic <input type="checkbox"/> Headcount <input type="checkbox"/> |

\*\* The credit fee and inspection and supervision fee will be established periodically by the Board of Executive Directors as part of its review of the Bank's lending charges, in accordance with applicable provisions. In no case will the credit fee exceed 0.75% or the inspection and supervision fee exceed, in a given six-month period, the amount that would result from applying 1% to the loan amount divided by the number of six-month periods included in the original disbursement period.

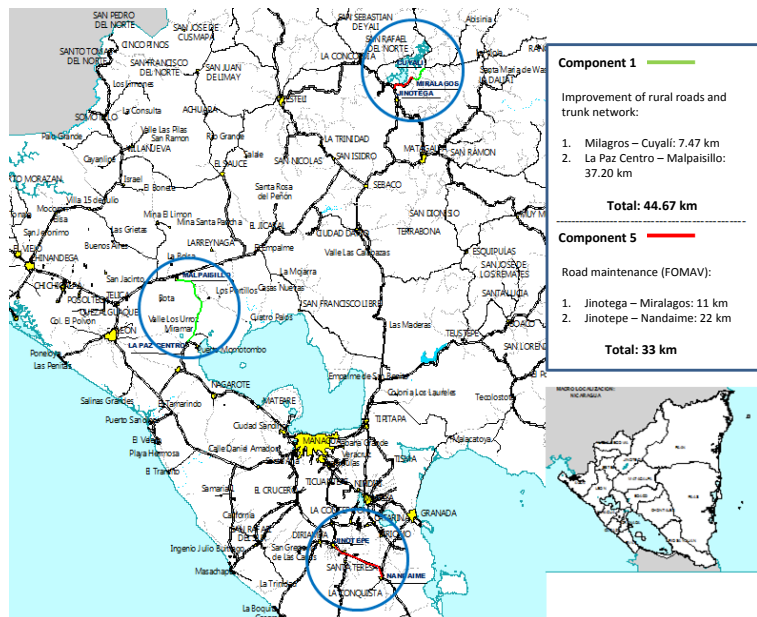
## I. DESCRIPTION AND RESULTS MONITORING

### A. A. Background, problems addressed, strategy, and rationale

1.1 **The importance of road transport.** Road transport plays a key role in the economic development of Nicaragua. The competitiveness of its industry, agriculture, and trade is closely linked to the efficiency and effectiveness of transport services. Every year some 437,000 vehicles travel over the national road system and more than 13 million tons of freight are transported, 38% of which is destined for export. In fact, a high percentage of Nicaragua's foreign trade moves through the ports of Honduras and Costa Rica, which are reached by means of the road system.

1.2 **Description of the national road network** ([Highways Map, optional link 9](#)). The country's road system is characterized by: (i) low density with respect to its territory (181.37 km/1,000 km<sup>2</sup>), which is below the Central American average; and (ii) the poor condition of the paved and unpaved network. This situation translates into high transport costs, posing an obstacle to national efforts to boost economic growth and reduce poverty.<sup>1</sup> According to data from the Ministry of Transport and Infrastructure (MTI) published in the *Red Vial Nicaragua* report of 2011,<sup>2</sup> the

national road network has a total length of 23,647.1 km, of which only 3,150.8 km (13.3%) is paved. Table 1 shows the distribution of the network by functional classification and wearing surface. A portion of this road network is known as the "basic road network," which, as defined in 2011 by the MTI, has a length of 7,985.3 km, of which 2,777.6 km is paved and 5,207.7 km unpaved. Of this basic road network, only 27.5% of the paved sections has an international roughness index of 4.5 m/km or less, which classifies them as being in good or very good condition. Of the unpaved system, only 9.5% is in good or very good condition.



<sup>1</sup> The link between road development and economic development is addressed in Richard Robinson & Bent Thagesen, *Road Engineering for Development*, Chapters 1 and 2, Second Edition, Taylor & Francis Group.

<sup>2</sup> See optional electronic link 8.

**Table 1. 2011 Nicaraguan Road Network. Consolidated by functional classification and surface type**

| Surface type/functional classification | Asphalt        | Adoquín [paving block] | Hydraulic concrete | Coated         | All weather    | Dry season     | Total (km)      | %           |
|----------------------------------------|----------------|------------------------|--------------------|----------------|----------------|----------------|-----------------|-------------|
| Primary trunk (km)                     | 1,079.5        | 1.2                    | 0                  | 0              | 0              | 0              | 1,080.7         | 4.5%        |
| Secondary trunk (km)                   | 546.4          | 73.9                   | 15.6               | 364.9          | 0              | 0              | 1,000.9         | 4.2%        |
| Primary feeder (km)                    | 440.3          | 310.2                  | 12.1               | 450.8          | 12.4           | 0              | 1,225.8         | 5.2%        |
| Secondary feeder (km)                  | 98.2           | 262.4                  | 13.8               | 1,647.8        | 595.2          | 92.7           | 2,710.2         | 11.5%       |
| Local road (km)                        | 134.4          | 149.8                  | 12.8               | 1,187.3        | 9,113.6        | 7,031.5        | 17,629.5        | 74.6%       |
| <b>TOTAL</b>                           | <b>2,298.9</b> | <b>797.5</b>           | <b>54.3</b>        | <b>3,650.8</b> | <b>9,721.3</b> | <b>7,124.2</b> | <b>23,647.1</b> | <b>100%</b> |
| %                                      | 9.7%           | 3.4%                   | 0.2%               | 15.4%          | 41.1%          | 30.1%          | 100%            |             |

- 1.3 **Institutional framework.** The MTI is the agency responsible for organizing and directing transport sector policy and for planning, preparing, contracting, and administering projects of road improvement, construction, and rehabilitation. In recent years, the MTI has increased its budget and execution levels have been improving, as shown in Table 2.

**Table 2. MTI investments 2006 – 2011 (US\$ million)**

| Infrastructure             | 2006  | 2007  | 2008  | 2009   | 2010   | 2011   |
|----------------------------|-------|-------|-------|--------|--------|--------|
| Earmarked external funding | 50.51 | 62.66 | 72.49 | 73.83  | 80.66  | 77.30  |
| Earmarked domestic funding | 25.38 | 33.91 | 17.78 | 26.61  | 30.87  | 39.52  |
| Amount budgeted            | 75.89 | 96.57 | 90.27 | 100.44 | 111.53 | 116.82 |
| Amount executed            | 46.63 | 81.91 | 80.61 | 98.49  | 111.34 | 116.62 |

Source: MTI-SIFGA-MHCP data to 2012

- 1.4 A key road-related institutional development in Nicaragua is the establishment of the Road Maintenance Fund (FOMAV), an autonomous State agency, the function of which is to ensure the upkeep of the maintainable road network nationwide.<sup>3</sup> It is funded primarily from the proceeds of a surcharge on gasoline and diesel (US\$0.16 per gallon), which in 2010 translated into an actual budget of US\$24 million and from the proceeds of loans or grants provided by bilateral or

<sup>3</sup> The “maintainable network” refers to that portion of the basic road network that is in good or fair condition, for which periodic or routine maintenance work can extend its useful life. FOMAV is not responsible for the portion of the basic network that is in bad condition requiring rehabilitation or reconstruction, nor is it involved with roads under municipal responsibility.

multilateral development agencies. Table 3 shows maintenance spending by FOMAV over the last five years, resulting from an incremental increase in the surcharge. The main challenge for FOMAV is to find new sources of funding, as its current resources are inadequate to cover the vast maintenance needs of the Nicaraguan road system, which, according to preliminary estimates, would be on the order of US\$80 million per year.

**Table 3. Maintenance expenditure by FOMAV 2006 – 2011 (US\$ million)**

| <b>Infrastructure</b>   | <b>2006</b> | <b>2007</b> | <b>2008</b> | <b>2009</b> | <b>2010</b> | <b>2011</b> |
|-------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Amount budgeted         | 11.5        | 22.7        | 31.7        | 36.0        | 41.5        | 38.3        |
| Amount spent            | 10.6        | 18.5        | 27.1        | 30.1        | 38.4        | 36.0        |
| a. Periodic maintenance | 2.2         | 4.1         | 5.8         | 6.3         | 9.0         | 11.0        |
| b. Routine maintenance  | 5.2         | 8.9         | 13.5        | 14.8        | 16.6        | 13.4        |
| c. Municipal transfers  | 2.3         | 3.2         | 4.5         | 6.1         | 8.3         | 7.7         |
| d. Supervision          | 0.3         | 1.2         | 2.1         | 1.7         | 2.9         | 2.5         |
| e. Other expenses       | 0.6         | 1.0         | 1.2         | 1.2         | 1.5         | 1.5         |

- 1.5 **Bank involvement in the sector.** The Bank has a long history of support for the transport sector in Nicaragua, with operations dating back to 1965. Since 2004 the Bank has approved five operations totaling US\$179.1 million, through which it has contributed to improving travel conditions and safety on the national road network, integrating the country's various regions, and promoting economic and social development.
- 1.6 **The MTI's vision.** In 2010, MTI authorities proposed to the Bank the following targets for work in the road sector: (i) increase investment in the road network in order to improve its accessibility, levels of service, and quality and achieve permanent functionality; (ii) steer investment toward roads that will support production and facilitate greater national and regional integration; (iii) guarantee the sustainability of investments through road maintenance; (iv) support the municipios in expanding their capacities for planning, project execution, and maintenance of municipal roads; (v) move forward with weight control on highways, enhance road safety, and reduce accident rates;<sup>4</sup> and (vi) take steps to reduce the road network's vulnerability to the effects of climate change.
- 1.7 **Country strategy.** The Bank's country strategy with Nicaragua 2008-2012 (document GN-2499) calls for the Bank to focus its contribution on five objectives in the government's plan, one of which is to improve the existing road system. Specifically, the country strategy calls for the Bank to contribute to the expansion of the paved road system and to maintenance work, giving priority to interventions

<sup>4</sup> Between 2005 and 2011 the vehicle fleet grew from 296,735 to 437,424 units. Over that same period, the number of road accidents per year rose from 15,406 to 23,797, and fatalities went up from 474 to 571 per year. Source: Road Maintenance Bureau, MTI, 2012.

that would provide greater integration at the national level and with the other countries of the Mesoamerican region.

- 1.8 **The problem.** Road transportation in Nicaragua is hampered by various factors. The road network is characterized by inadequate operating capacity coupled with a management system that needs to be more efficient in view of the enormous needs and limited resources. Evidence of this situation can be found in: (i) the inadequate functionality of part of the road system that links production centers and export markets, and the poor condition of the unpaved road network that provides access to rural primary production areas or those with tourism potential (paragraph 1.2); (ii) accelerated deterioration of the road network through lack of control over vehicle weights and dimensions, and the need for greater maintenance coverage (paragraph 1.4); (iii) rising road accident rates stemming from growth in the vehicle fleet, driving habits, and constraints in terms of resources for addressing the problem (paragraph 1.6); and (iv) the need to strengthen technical capacities to consider the impact of climate change and optimize investment planning and results-based management.
- 1.9 Although there is no systematic empirical evidence available, some studies have addressed the impact of infrastructure services in the country's rural areas.<sup>5</sup> Those studies suggest that better access to productive and basic infrastructure in Nicaragua is associated with greater productivity, poverty reduction, and lower infant mortality. Households with access to rural roads are five times less likely to be living in poverty than those without such access.<sup>6</sup> The distance to main roads, health centers, and schools has a significant impact on the conditions and opportunities for rural households to improve their lives. In the provision of health, education, and market services there are distance thresholds beyond which their timely use is difficult. The maximum practical distance from home to the closest health center is 2 kilometers, to school, 1.5 kilometers, and to the main road, up to a maximum of 10 kilometers, equivalent to a travel time of 2.5 hours. The basic and productive infrastructure accessible to households is directly related to the characteristics of the closest access route. The studies show that households with access to all-weather roads have readier access to productive and basic infrastructure, which opens opportunities for diversifying their per capita income. Moreover, 75% of households with access to summer-only roads have no basic services, while for those with access to all-weather roads the equivalent figure drops to 45%.

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<sup>5</sup> For more details, see the following documents: (i) Nicaragua: Analysis of the Impact of Infrastructure Services and Living Conditions in Rural Areas, Final Consultant's Report, ECLAC/IDB/FPRI Cooperation Project; (ii) Nicaragua Report on Poverty 1993-2005, Principal Report 30 March 2008, World Bank document; (iii) Monograph Opportunities for Income Generation in Nicaragua: Access to Infrastructure, Investment Inputs, and Rural Productivity, Diego Angel-Urdinola, Ezequiel Molina, and María Victoria Fazio, World Bank consultants; and (iv) Rural Roads Infrastructure Improvement Project, Report 61418-NI, World Bank, November 2011.

<sup>6</sup> Nicaragua: Analysis of the Impact of Infrastructure Services and Living Conditions in Rural Areas, Final Consultant's Report, ECLAC/IDB/FPRI Cooperation Project.

- 1.10 **The Transport Sector Support Program.** In response to the MTI's sector vision and the priorities established by the Bank and the Government of Nicaragua, it was agreed to develop a series of operations in the road sector as part of a Transport Sector Support Program (TSSP, or Program) intended to address the problem described above (paragraph 1.8). The overall design of these operations, within a single framework, is of great importance for ensuring a strategic approach to investment planning focused on key components that address critical aspects of road infrastructure and institutional arrangements, instead of isolated, one-off actions, thereby encouraging other cooperation agencies to undertake parallel action on some of the TSSP's components.
- 1.11 The TSSP has been designed under the multiple works modality, which will give it the flexibility to adjust its investment plan on the basis of resource programming decisions for the country. Program activities are grouped into five strategic components (see paragraphs 1.16, 1.17, 1.18, 1.20, and 1.21), designed so that each of them individually will produce benefits sufficient to guarantee their feasibility.
- 1.12 The first loan under the TSSP, loan 2427/BL-NI, was approved by the Board of Executive Directors in 2010. It is currently in execution and 23% of the total amount approved by the Bank is expected to be disbursed by December 2012.<sup>7</sup> This proposed operation constitutes the second loan from the Bank under the TSSP conceived as a series of operations with a programmatic approach that retain the same objective, components, and execution arrangements.
- 1.13 **Parallel action of other donors.** In the course of the Nicaraguan government's negotiations with the Nordic Development Fund (NDF), in August 2012 that agency approved a grant of €4.4 million to Nicaragua in support of measures for adapting to climate change in the road transport sector.<sup>8</sup>
- 1.14 **Rationale for Bank participation.** This operation (the "Project") and the TSSP as a whole respond to the priorities set by the Nicaraguan government (paragraph 1.6) and are part of the current country strategy with Nicaragua 2008-2012 (paragraph 1.7). The Project also addresses three of the Bank's strategic institutional priorities as set forth in the Report on the Ninth General Increase in Resources (document AB-2764): (b) *Infrastructure for competitiveness and social welfare*, through projects to improve rural roads and the trunk system (paragraph 1.16); (d) *Competitive regional and global international integration*, through road improvement and maintenance interventions on sections of the International Mesoamerican Highway Network (paragraphs 1.16, 1.21, and 1.22); and (e) *Protect the environment, respond to climate change, promote renewable energy, and ensure food security*, through various activities to reduce the road system's vulnerability to the effects of climate change (paragraph 1.20).

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<sup>7</sup> The executing agencies have been working in 2012 to prepare their respective bidding processes, which are expected to be reflected in outputs and significant disbursements in 2013.

<sup>8</sup> Although the grant is the result of a government initiative, the inclusion of Component 4, Reduction of the road system's vulnerability to climate change, as part of the project facilitated the dialogue and the outcome.

**B. Objectives, components, and costs**

- 1.15 **Objective.** The general objective of Transport Sector Support Program II is to make road transport in Nicaragua more efficient in order to stimulate economic activity and contribute to the welfare of the population, by facilitating integration of the country's various regions and of those regions with the rest of Central America. The specific objectives are: (i) to reduce vehicle operating costs; (ii) to increase travel speeds; (iii) to reduce traffic disruptions; (iv) to reduce accident rates; (v) to foster road infrastructure maintenance; and (vi) to reduce the road network's vulnerability to climate change.
- 1.16 **Component 1. Improvement of rural roads and the trunk network (US\$28,301,000).** The MTI will use the resources allocated to this component to award works contracts for structural and/or functional improvements to rural roads and the trunk network, as well as supervisory services. The following projects are being considered: (i) La Paz Centro-Malpaisillo (37.2 km), of the primary trunk network, in the departments of León and Chinandega; and (ii) improvements to the Miralagos-Cuyalí (7.47 km) highway, of the primary feeder network, located in the Department of Jinotega.
- 1.17 **Component 2. Institutional strengthening (US\$1,051,000).** The MTI will use the resources allocated to this component to award contracts for works and services and acquire goods to improve the planning, management, and upkeep of road infrastructure and to enhance its capacities to manage and execute IDB programs. In particular, the following areas of intervention have been designated: (i) strengthening controls over vehicle weights and dimensions (the construction of two weigh stations is planned, at Ocotol and Los Cedros, and improvement of the Mateare station); and (ii) implementing the action plan to strengthen execution of IDB-financed operations, which will include the recommendations in Annex III, Fiduciary Agreements and Requirements. **As a special contractual condition precedent to the first disbursement, an action plan for institutional strengthening will have been agreed upon with the Bank;** and a special contractual condition for execution is that the MTI and FOMAV, as the executing agencies, will implement the action plan for institutional strengthening agreed upon with the Bank.
- 1.18 **Component 3. Road safety (US\$202,000).** With funds from this component, the MTI will award contracts for services in support of road safety, continuing with alignment efforts in the context of the Road Safety Strategy for Latin America and the Caribbean promoted by the Bank.
- 1.19 The activities under consideration for financing will be included in the 2013-2018 Road Safety Strategy, now being prepared under loan 2427/BL-NI. The actions to be carried out are expected to help reduce the high incidence of accidents caused by the interaction of vehicles, pedestrians, and cyclists.
- 1.20 **Component 4. Reduction of the road system's vulnerability to climate change (US\$232,000).** With resources from this component, preinvestment studies will be

- financed that will contain activities to reduce the road system's vulnerability to the effects of climate change. The MTI has identified as a priority the Chinandega-Guasaule route, for which technical studies will be prepared that will make it possible to later build the respective mitigation works.<sup>9</sup>
- 1.21 **Component 5. Road maintenance (US\$7,801,000).** With the resources from this component FOMAV will award contracts for works and services conducive to maintaining the trunk network and rural roads, as well as to strengthen its capacity for maintenance planning, management, and execution nationwide.
- 1.22 Financing of periodic maintenance for the following sections has been considered: (i) Jinotega-Miralagos (11 km), and (ii) Jinotepe-Nandaime (22 km). These sections are part of the primary trunk network. The preparation of manuals on environmental control, road safety, and occupational health will also be financed. Counterpart funding from FOMAV will be used to finance supervision of the works under this component.
- 1.23 **Selection criteria.** Feasibility analyses are available for the projects under Components 1 and 5 (paragraph 1.27), the returns on which have been demonstrated. The outputs for all the components have been identified. Other activities or projects to be financed under the program will be identified in the program's Operating Manual, which will stipulate that projects must exhibit the technical, environmental, and social feasibility and the economic return required by the Bank, with an economic internal rate of return (EIRR) of at least 12%, and comply with the general specifications (paragraph 1.25).
- 1.24 **Costs.** The total cost of this operation will be US\$40,518,000, of which US\$39,200,000 will be financed by the Bank with parallel funds drawn from the Single Currency Facility of the Ordinary Capital (OC) and from the Fund for Special Operations (FSO), considered as a single loan with two sources for *pari passu* disbursement in proportions of 50% and 50%, respectively. The remaining US\$1,318,000 will constitute the local contribution. The Project will have an execution period of five years. The breakdown of costs is presented in Table 4.

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<sup>9</sup> The Chinandega-Guasaule highway is part of the Central American Natural Corridor, which links the principal cities and capitals of Central America. Under normal traffic conditions, this corridor carries more than 90% of international traffic crossing the northern border. El Guasaule (located 5 km from Somotillo and 206 km from Managua) serves as the border crossing between Nicaragua and Honduras. Most of the heavy freight traversing the country by road to neighboring countries to the north and south passes through this customs station. This road has a constant flow of international freight truck and van traffic as well as tourists, private vehicles, and mass transit vehicles. Traffic is interrupted each winter by constant climate change-induced flooding over a stretch of 28 km between station 164+0000 (Villa 1 de Julio) and station 194+0000.

**Table 4. Costs and financing (US\$000)**

| Investment category |                                                  | IDB           | Local        | Total          |
|---------------------|--------------------------------------------------|---------------|--------------|----------------|
| <b>A</b>            | <b>Direct costs</b>                              | <b>36,491</b> | <b>1,096</b> | <b>37,587</b>  |
| 1                   | Improvement of rural roads and the trunk network | 27,749        | 552          | 28,301         |
| 2                   | Institutional strengthening                      | 1,042         | 9            | 1,051          |
| 3                   | Road safety                                      | 200           | 2            | 202            |
| 4                   | Reduction of vulnerability to climate change     | 200           | 32           | 232            |
| 5                   | Road maintenance                                 | 7,300         | 501          | 7,801          |
| <b>B</b>            | <b>Administration and management</b>             | <b>1,281</b>  | <b>222</b>   | <b>1,503</b>   |
| 1                   | Audits                                           | 370           | 87           | 457            |
| 2                   | Monitoring and evaluation                        | 260           | 42           | 302            |
| 3                   | Environmental and social management              | 151           | 12           | 163            |
| 4                   | Studies, preinvestment and design                | 500           | 81           | 581            |
| <b>C</b>            | <b>Contingencies</b>                             | <b>478</b>    | <b>0</b>     | <b>478</b>     |
| <b>D</b>            | <b>Financial expenses</b>                        | <b>950</b>    | <b>0</b>     | <b>950</b>     |
| <b>TOTAL</b>        |                                                  | <b>39,200</b> | <b>1,318</b> | <b>40,518</b>  |
|                     |                                                  | <b>96.75%</b> | <b>3.25%</b> | <b>100.00%</b> |

- 1.25 **General project specifications.** All physical projects to be financed with program funds must satisfy the following conditions: (i) no construction projects will be financed if they involve mass expropriation or the displacement of people, or would have other similar social impacts; (ii) projects must be self-sufficient from a socioeconomic viewpoint, i.e. the benefits justifying each individual project must be independent of other, complementary physical projects; (iii) projects to be financed must comprise appropriate technical alternatives duly substantiated vis-à-vis the Bank; (iv) the projects will be identified in the short- and medium-term plans of the MTI or FOMAV, as appropriate, and will have the prior approval of the Bank; and (v) if rights-of-way are required, these will be obtained before the works begin.
- 1.26 For the improvement of trunk and rural roads, MTI analyses indicate that foundation reinforcement and surface treatment constitute the technical option with the highest socioeconomic evaluation indicators. There are other technical options with acceptable indicators, such as paving blocks [*adoquines*] or hydraulic concrete; however, in view of the substantial difference in the initial investment, the following is recommended: (i) perform a detailed assessment of the benefits of these technologies; and (ii) reserve them for cases where the advantages are substantial. The program may finance works using other technologies, provided they are technically superior to the alternatives and their socioeconomic evaluation produces clearly higher indicators. In these cases, the Bank's prior no objection will be required to finance works using other technologies.

- 1.27 **Project sample.** Table 5 presents the sample of projects that were technically analyzed and economically evaluated during preparation of this operation. The MTI improvement projects are part of a subset of priority projects included in the institution's 2007-2017 Medium-term Investment Plan, potentially eligible for financing with resources from the Project. FOMAV has produced an analysis of the status of the maintainable network. This was used to prioritize urgent periodic maintenance projects, from which the projects included in this operation are drawn. The rates of return resulting from the economic evaluation<sup>10</sup> are reasonable and typical for projects of this kind (see Table 5).

**Table 5. Sample of projects**

| <b>Component/Project</b>                                             | <b>Cost<br/>(US\$000)</b> | <b>Observations</b>                                                                                         |
|----------------------------------------------------------------------|---------------------------|-------------------------------------------------------------------------------------------------------------|
| <b>Component 1: Improvement of rural roads and the trunk network</b> |                           |                                                                                                             |
| La Paz Centro–Malpaisillo                                            | 22,300                    | Length: 37.2 km. Technical solution: two coats surface dressing. EIRR: 19%.                                 |
| Miralagos–Cuyalí                                                     | 3,600                     | Length: 7.47 km. Technical solution: : rehabilitation with microsurfacing. EIRR: 22.7%.                     |
| <b>Component 5: Road maintenance</b>                                 |                           |                                                                                                             |
| Periodic maintenance Jinotega–Miralagos                              | 1,500                     | Length: 11.0 km. Periodic maintenance. including surface recycling and asphalt microsurfacing. EIRR: 46.7%. |
| Periodic maintenance Jinotepe–Nandaime                               | 5,500                     | Length: 22.0 km. Periodic maintenance. including 70 mm asphalt reinforcement. EIRR: 43.2%.                  |

### **C. Principal results indicators**

- 1.28 This operation is designed to produce the following results: (i) physical, such as execution of works, including road improvement, rehabilitation, and maintenance, so as to make the country's paved road network more accessible and thereby reduce traffic interruptions and improve the quality of infrastructure as measured by the International Roughness Index (IRI), and to preserve the asset value of the roads; (ii) operational, such as reduction in vehicle operating costs and travel times, as well as increased traffic; (iii) road safety, such as reducing the traffic accident rate on the roads covered by the program; and (iv) technical assistance and institutional development. Annex II presents the results matrix in detail. The direct beneficiaries will be users of the roads covered by the program and, indirectly, the communities living in their areas of influence.

<sup>10</sup> The economic evaluation is found at [optional electronic link 1](#).

## II. FINANCING STRUCTURE AND MAIN RISKS

### A. Financial instruments

- 2.1 This operation will be a multiple-works investment loan from the Bank in the amount of up to US\$39.2 million, under a concessional lending arrangement, of which 50% would come from the Single Currency Facility of the Ordinary Capital (OC) and 50% from the Fund for Special Operations. The projected disbursement schedule is presented in Table 6.

**Table 6. Projected disbursement schedule (US\$000)**

| Source                   | 2013         | 2014          | 2015          | 2016         | 2017         | Total         |
|--------------------------|--------------|---------------|---------------|--------------|--------------|---------------|
| IDB                      | 3,562        | 13,935        | 10,334        | 7,189        | 4,180        | 39,200        |
| Nat'l govt. contribution | 236          | 372           | 365           | 205          | 140          | 1,318         |
| <b>Total</b>             | <b>3,798</b> | <b>14,307</b> | <b>10,699</b> | <b>7,394</b> | <b>4,320</b> | <b>40,518</b> |

### B. Environmental and social risks

- 2.2 **Positive social and environmental impacts.** The Project has been classified as an environmental category B operation, in accordance with the Bank's environment and safeguards compliance policy. The characteristics and objectives of the works are designed to produce significant and positive social and environmental impacts, inasmuch as it will: (i) help enhance quality of life in various communities by improving accessibility to basic services and possibilities for personal development; (ii) help reduce poverty by giving producers better access to markets and improving general access to employment opportunities; (iii) reduce the costs of transport by improving design speed and the technical state of roadways; (iv) contribute to road sustainability through systematic maintenance; and (v) help reduce the road system's vulnerability to risks associated with climate change.
- 2.3 **Negative environmental impacts and mitigation measures.** The Project does not call for financing any large-scale works that would cause significant environmental disruption, or any works in zones of high environmental and social sensitivity. The Environmental and Social Management Framework (ESMF) developed during preparation of loan 2427/BL-NI is being used for the preparation of this new operation. It had been put to consultation in 2010 and has now been updated. That instrument includes a table with a general overview of the potential impacts of new road infrastructure projects and general mitigation measures that will be adopted. In addition, it includes some social and environmental guidelines and procedures for mitigating these impacts. As a special contractual condition during execution of the loan, it has been agreed that works financed from the project will comply with the ESMF, which is part of the program's Operating Manual.
- 2.4 During the construction phase, the anticipated social and environmental impacts will include (i) air quality changes, (ii) changes in soil stability and increased risk of

instability, (iii) changes to the natural landscape, (iv) water quality changes caused by occasional residues, (v) disruption of habitat and vegetation, (vi) increased noise levels, (vii) changes to surface drainage, (viii) changes to water quality from silting, and (ix) changes associated with human resettlement. Known mitigation measures will be adopted in accordance with national legislation and the Bank's safeguard policies (OP-703, OP-704, OP-710, and OP-765). For maintenance projects, asphalt surface replacement, and drainage works the potential impacts are likely to be less complex. The ESMF also contains a table showing the potential environmental impacts and their mitigation measures. The MTI has put the ESMF to public consultation and has published it at its website.<sup>11</sup> MTI and FOMAV staff members have been trained in implementing the ESMF. The Environmental and Social Management Report includes a budget of US\$151,000 for mitigation measures under the program.<sup>12</sup> It also indicates the need to establish two agreements, the first between the MTI and the Ministry of Environment and Natural Resources (MARENA) on fire prevention and control in the Momotombo Volcano protected area, located 250 meters from the existing highway, and the second between the MTI and the National Police for matters related to driver education. In both these cases, the MTI will transfer the needed funds for implementing those plans, once the institutions involved present their activities plan, terms of reference, budget, and schedule, which must be approved in advance by the MTI and must carry the Bank's no objection. The respective procedure will be agreed upon in the Program's Operating Manual.

### **C. Fiduciary risks**

- 2.5 As part of the preparatory work for the TSSP's first operation, a report was prepared assessing the institutional capacity for procurement and the Institutional Capacity Assessment System (ICAS) tool was applied to the executing agencies. The analyses and recommendations that resulted are still considered valid for the present operation. The risk level assigned to the MTI and FOMAV is medium. The MTI has experience in executing projects financed by the Bank. It is currently implementing operations 1796/SF-NI, 1530/SF-NI, 1599/SF-NI, 2225/BL-NI, and 2427/BL-NI. With respect to FOMAV, as it has not been an executing agency for operations financed by the Bank, it will be important to provide it with adequate training before the operation begins. On financial management issues, the implementation capacity of the executing agencies must be reinforced, primarily with respect to controls. The staff has professional training, knowledge of public management, and resources, which, coupled with support from the project team, will enable it to make significant advances in fiduciary management.

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<sup>11</sup> <http://www.mti.gob.ni>

<sup>12</sup> For preparing the Environmental and Social Management Report (ESMR), the VPS/ESG specialist made a field visit to the projects considered in this operation.

**D. Other issues and risks**

- 2.6 **Technical and economic feasibility.** Both the MIT and FOMAV have produced technical and economic feasibility studies of the projects in the sample. Before putting the works to tender the designs and the economic feasibility will have to be updated. The borrower undertakes to ensure that the MTI and FOMAV will commission a technical and environmental audit, respectively, to assess the designs of the respective projects and to monitor the works during execution until final acceptance of each project. As a special condition of execution, before the works tendering process begins, the MTI and the FOMAV will each contract a technical and environmental auditor to assess the designs, verify the economic feasibility, and monitor execution until final acceptance of each project.
- 2.7 As a special contractual condition of execution, the borrower will present to the Bank for its no objection, before tendering begins, the documentation established in the program's Operating Manual for each of the works under Component 1 (improvement of rural roads and the trunk network) and Component 5 (road maintenance). The documents for goods and consulting services will also contain updated budgets and execution schedules.
- 2.8 **Execution risks.** The risks related to execution are considered low for the following reasons: (i) the works under consideration are not of any particular technical complexity; (ii) both the MTI and FOMAV have experience with similar projects; and (iii) there are construction firms available to carry out the works to be financed. To mitigate risks of cost overruns the following measures have been taken: (i) designs and budgets have been updated; (ii) two technical auditors have been engaged to monitor project designs and execution (paragraph 2.6); and (iii) price adjustment formulas have been incorporated. In addition, an institutional strengthening plan will be implemented (paragraph 1.17).
- 2.9 **Sustainability of investments.** FOMAV will be responsible for maintaining the road works financed under this Project, and will send an annual report to the borrower on the status of those works. That information will be compiled by the borrower and submitted annually to the Bank, within the first three months of each calendar year, together with the annual maintenance plan prepared by FOMAV. As a special contractual condition for execution, maintenance of all the road works financed by the Project must remain under the responsibility of FOMAV, which undertakes to present the respective annual reports until four years after the last disbursement.

**III. IMPLEMENTATION AND MANAGEMENT PLAN**

**A. Implementation mechanism**

- 3.1 **Borrower and executing agency.** The borrower will be the Republic of Nicaragua and the executing agencies will be the MTI (Components 1, 2, 3, and 4) and FOMAV (Component 5). Within the MTI, the Coordination Unit for IDB-financed

- Projects (PCU), under the Roads and Highways Department (DGV), will be responsible for coordinating the Project's execution activities. The PCU will draw support from the various MTI administrative units and technical divisions involved in implementing the operation and from the experts contracted under the institutional strengthening action plan to be agreed upon with the Bank. Within FOMAV, the Executive Board will be responsible for coordinating the Project's execution activities. The Board will have the support of the Technical Division, the Financial Administration Division, the Legal Advisory Service, and the Procurement Division.
- 3.2 **Operating Manual.** The Project will have an operating manual that will set out the operational aspects of a technical, economic, environmental, and fiduciary nature to be applied by the executing agencies for its implementation. The rules for execution of the MTI-Marena and MTI-National Policy agreements will be set out in the manual. The Operating Manual for loan 2427/BL-NI (Transport Sector Support Program I) will be updated as that loan has the same objective and components as this operation. **The borrower is responsible for fulfilling the special contractual condition precedent to the first disbursement, to the effect that the Program's Operating Manual has been updated and is in force, with the Bank's no objection.**
- 3.3 **Financial management.** Financial and accounting management of the project will be handled by the financial and accounting units of the two executing agencies. Both units were evaluated by the financial sector in the Bank's Country Office in Nicaragua and, while some weaknesses were detected, it was found that from the date of the original assessment until the updating that took place in August 2012, more than 90% of the actions indicated in the action plan for each institution had been fulfilled. Those actions have a significant positive impact in terms of control, financial planning, and disbursement management. FMP/CMI will continue to help with monitoring and implementation of strengthening plans for both institutions.
- 3.4 **Procurement.** The procurement of goods, works, and services stemming from this second operation will be carried out by the MTI's Procurement Unit and FOMAV's Procurement Division for the components under their respective responsibility, in accordance with the "Policies for the procurement of works and goods financed by the IDB" (document GN-2349-9) and the "Policies for selection and contracting of consultants financed by the IDB" (document GN-2350-9), both of March 2011. The procurement agreements and requirements will be handled in accordance with Annex III.
- 3.5 The Bank will provide retroactive financing (against the loan proceeds) for up to US\$300,000 (0.77%) and will recognize eligible expenses (against the local contribution) for up to US\$48,450 (3.68%). These expenditures will be incurred during the 18 months preceding the date of loan approval but subsequent to 9 August 2012 (date of approval and signature of the aide-mémoire from the analysis mission), and will be made in accordance with the Bank's procurement policies or substantially similar procedures. The procurement plan calls for the

direct selection of consulting services in four instances: (i) independent financial audit of the program (consulting services for review and analysis of the program's financial statements, estimated at US\$276,000); (ii) independent technical audit of Component 1 (technical review of engineering designs and monitoring of works supervision, estimated at US\$80,000); (iii) independent environmental audit of Component 1 (verification of implementation of the social and environmental strategy under Component 1, estimated at US\$50,000); and (iv) monitoring of social and environmental variables for the Acoyapa-San Carlos-Costa Rican border project, estimated at US\$116,000. For the consulting services under (i) and (iv), it was determined that the firms are qualified, represent optimum efficiency and economy, and will continue with the technical approach and experience that offers the greatest advantage to a new process. For the consulting services under (ii) and (iii), where the amount does not exceed US\$100,000, direct selection is justified because the firms represent a natural continuation of services performed in competitive processes.

## **B. Summary of arrangements for monitoring and evaluation of results**

- 3.6 **Monitoring.** During project execution the executing agencies will present consolidated semiannual progress reports to the Bank, indicating progress under each component, including the agreed indicators (Results Matrix). The reports will also include: (i) a description of activities carried out; (ii) updated timetables for physical execution and disbursements; (iii) the extent to which the agreed execution indicators have been achieved;<sup>13</sup> (iv) a program of activities for the coming six months; (v) a summary of the Project's financial execution status and a forecast of the flow of funds for the next six months; (vi) identification of possible events that could jeopardize execution of the Project; (vii) a description of how the procurement processes in the Program's Operating Manual will be reviewed and adjusted in accordance with the Bank's recommendations; and (viii) a description of the implementation of the action plan for strengthening the execution capacity of the executing agencies agreed upon with the Bank. The borrower will present to the Bank: (i) a midterm evaluation of the Project when 50% of the funding has been disbursed; and (ii) a final evaluation when the Project is 90% disbursed. These evaluations will include, at least: (i) the results of financial execution for each component; (ii) fulfillment of the established targets, in accordance with the agreed results indicators; and (iii) compliance with contractual commitments.<sup>14</sup> In addition, the MTI will submit semiannual reports to the Bank, for a period of 18 months beginning in January 2014, describing the monitoring of social and environmental variables of the Acoyapa-San Carlos-border with Costa Rica project.
- 3.7 **External audit.** During execution of the Project, and within 120 days of the close of the fiscal year, the borrower will present to the Bank annual financial statements

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<sup>13</sup> The Results Framework contains the impact, output, and outcome indicators that will be monitored during the life of the project.

<sup>14</sup> [Required link 2](#) presents details of the monitoring and evaluation plan proposed for this operation.

for the project, duly audited by an independent audit firm acceptable to the Bank. The costs of the audit will be charged to the loan. To this end FMP/CNI will work with the executing agencies to prepare the terms of reference for direct selection (paragraph 3.5). To strengthen the processes of designing, executing, and supervising the works and complying with the Bank's environmental and safeguards policy, technical and environmental audits of the Project will be performed by independent specialists. The cost of these audits will be financed with loan proceeds.

- 3.8 **Other special contractual conditions.** Because FOMAV is an autonomous State entity, **signature of the execution agreement between the Ministry of Finance (MHCP) and the Road Maintenance Fund (FOMAV) for road maintenance under Component 5 will be a special contractual condition precedent to the first disbursement.**

| Development Effectiveness Matrix                                                                                                                                                     |                                                                                                                  |                                                                                                                                                                                |               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| Summary                                                                                                                                                                              |                                                                                                                  |                                                                                                                                                                                |               |
| I. Strategic Alignment                                                                                                                                                               |                                                                                                                  |                                                                                                                                                                                |               |
| 1. IDB Strategic Development Objectives                                                                                                                                              | Aligned                                                                                                          |                                                                                                                                                                                |               |
| Lending Program                                                                                                                                                                      | (i) Lending to small and vulnerable countries, and (ii) Lending to support regional cooperation and integration. |                                                                                                                                                                                |               |
| Regional Development Goals                                                                                                                                                           | Paved road coverage (Km/Km2).                                                                                    |                                                                                                                                                                                |               |
| Bank Output Contribution (as defined in Results Framework of IDB-9)                                                                                                                  | Km of inter-urban roads build or maintained/upgraded.                                                            |                                                                                                                                                                                |               |
| 2. Country Strategy Development Objectives                                                                                                                                           | Aligned                                                                                                          |                                                                                                                                                                                |               |
| Country Strategy Results Matrix                                                                                                                                                      | GN-2499                                                                                                          | (i) Improve the road network, and (ii) Ensure road maintenance and institutional strengthening of the sector.                                                                  |               |
| Country Program Results Matrix                                                                                                                                                       | GN-2661-4                                                                                                        | The intervention is included in the 2012 Country Program Document.                                                                                                             |               |
| Relevance of this project to country development challenges (If not aligned to country strategy or country program)                                                                  |                                                                                                                  |                                                                                                                                                                                |               |
| II. Development Outcomes - Evaluability                                                                                                                                              | Highly Evaluable                                                                                                 | Weight                                                                                                                                                                         | Maximum Score |
|                                                                                                                                                                                      | 8.7                                                                                                              |                                                                                                                                                                                | 10            |
| 3. Evidence-based Assessment & Solution                                                                                                                                              | 8.3                                                                                                              | 25%                                                                                                                                                                            | 10            |
| 4. Ex ante Economic Analysis                                                                                                                                                         | 10.0                                                                                                             | 25%                                                                                                                                                                            | 10            |
| 5. Monitoring and Evaluation                                                                                                                                                         | 6.5                                                                                                              | 25%                                                                                                                                                                            | 10            |
| 6. Risks & Mitigation Monitoring Matrix                                                                                                                                              | 10.0                                                                                                             | 25%                                                                                                                                                                            | 10            |
| Overall risks rate = magnitude of risks*likelihood                                                                                                                                   | Medium                                                                                                           |                                                                                                                                                                                |               |
| Environmental & social risk classification                                                                                                                                           | B                                                                                                                |                                                                                                                                                                                |               |
| III. IDB’s Role - Additionality                                                                                                                                                      |                                                                                                                  |                                                                                                                                                                                |               |
| The project relies on the use of country systems (VPC/PDP criteria)                                                                                                                  | Yes                                                                                                              | Financial Management: Budget, Treasury, Accounting and Reporting.<br>Procurement: Information system.                                                                          |               |
| The project uses another country system different from the ones above for implementing the program                                                                                   |                                                                                                                  |                                                                                                                                                                                |               |
| The IDB’s involvement promotes improvements of the intended beneficiaries and/or public sector entity in the following dimensions:                                                   |                                                                                                                  |                                                                                                                                                                                |               |
| Gender Equality                                                                                                                                                                      |                                                                                                                  |                                                                                                                                                                                |               |
| Labor                                                                                                                                                                                |                                                                                                                  |                                                                                                                                                                                |               |
| Environment                                                                                                                                                                          | Yes                                                                                                              | A total of 45 staff members from the MTI and FOMAV were trained on the application of the Framework for Environmental and Social Management to be used during a project cycle. |               |
| Additional (to project preparation) technical assistance was provided to the public sector entity prior to approval to increase the likelihood of success of the project             | Yes                                                                                                              | The Bank hired a team of experts to strengthen the technical and management areas of the executing agencies.                                                                   |               |
| The ex-post impact evaluation of the project will produce evidence to close knowledge gaps in the sector that were identified in the project document and/or in the evaluation plan. |                                                                                                                  |                                                                                                                                                                                |               |

The POD presents the problems to be addressed by the project as well as the factors causing them. Although the proposed interventions are linked to the problems identified in the diagnosis, the magnitudes of the problems are not provided. Given that these magnitudes are not presented, it is difficult to ascertain if the project's dimension is in line with the dimension of the problems. The results matrix has vertical logic. The project's impacts are specified and there is an indicator for each impact. The indicators are SMART, have targets and sources of information. However, the base line is not provided (it will be obtained in 2013). The outcomes and outputs are clearly presented and the indicators are SMART, have targets, baselines and sources of information. With regards to the data for the PMR, all outputs have annual targets and the project costs are broken down by outputs but are not presented by year.

The project was analyzed using a cost-benefit analysis. The economic benefits and costs are clearly identified. The assumptions used are specified and a sensitivity analysis was undertaken. The project has a monitoring and evaluation plan. Although the monitoring activities are presented they do not have a budget assigned. A total of monitoring costs is included, but this corresponds only to the administration and management activity. The evaluation plan follows the DEM guidelines. The operation will be evaluated using a reflexive methodology and an ex-post cost-benefit analysis.

Finally, the risk matrix presents the projects risks, which are rated for magnitude and probability. Mitigation measures are presented for each risk as well as indicators to monitor its implementation.

## RESULTS MATRIX

|                        |                                                                                                                                                                                                                                                                      |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Purpose of the program | Help make road transport in Nicaragua more efficient in order to stimulate economic activity and contribute to the welfare of the population in the project's service areas, while facilitating integration within the country and with the rest of Central America. |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

| Impact Indicator                                                                                                                                | Baseline 2013 | Target (2017)                                                                                                                                      | Means of Verification/Comments                                                                                                                                                                                                                                                                                |
|-------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Number of businesses of all kinds operating in the service areas of the roads improved <sup>(1)</sup> through this operation.                   | (*)           | Increase of at least 5% in the total number of businesses of all kinds operating in the service areas of the roads improved through this operation | These indicators seek to reflect the impact of improved transportation on economic activity in the service areas of the road sections improved through the operation.<br>Values to be determined in 2017 through field investigations by consultants or specialized entities contracted with project funding. |
| Average income (US\$/month-family) of families living in the service areas of the road sections improved <sup>(1)</sup> through this operation. | (*)           | Increase of at least 3% (in real terms) in average family income in the service areas of the road sections improved through this operation.        |                                                                                                                                                                                                                                                                                                               |

(\*) These values will be determined and/or reconfirmed when the 2013 baseline is established, using as a guide the findings and recommendations of the consultant contracted for these purposes.

(1) Improved sections: these are defined as the dirt or gravel road sections that are paved.

|                   |                                                                                                                                                                                                                                                                                                                  |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Project objective | To help make road transport more efficient by (i) reducing vehicle operating costs; (ii) increasing travel speeds; (iii) improving access to the national road network; (iv) reducing accident rates; (v) maintaining road infrastructure; and (vi) reducing the road network's vulnerability to climate change. |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

| Outcome Indicators <sup>(**)</sup>                                                                                                              | Baseline (2011)                | Target (2017)                  | Means of Verification/Comments                                                                                                                                                                                                                                                                                                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Accessibility index for paved roads of the National Road Network (km of paved roads for every 1,000 km <sup>2</sup> of land area in Nicaragua). | 24.17 km/1,000 km <sup>2</sup> | 24.51 km/1,000 km <sup>2</sup> | Paved km: the MTI's <i>Revista de Inventario Vial</i> : ( <a href="http://www.mti.gob.ni/index.php/documentos/cat_view/123-dgp">http://www.mti.gob.ni/index.php/documentos/cat_view/123-dgp</a> )<br>Land area: Nicaraguan Institute of Territorial Studies (INETER) ( <a href="http://www.ineter.gob.ni/">http://www.ineter.gob.ni/</a> ) |

| Outcome Indicators <sup>(**)</sup>                                                                                                         | Baseline (2011)                                                                                                                                                                                                                                                                                                                           | Target (2017)               | Means of Verification/Comments |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|--------------------------------|--|--------------------|-----------------------------|-----|-------|-------|-----|-------|-------|------------|-------|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------------------------|--|--------------------|-----------------------------|-----|-------|-------|-----|-------|-------|------------|-------|-------|----------------------------------------------------------------------------------------------------------------------------------------|
| Vehicle operating cost (VOC) (van, bus and 10-ton truck) on road sections improved by the project (constant US\$/Vehicle-km)               | <table><tr><th rowspan="2">Type of Vehicle</th><th colspan="2">VOC (US\$/Veh-km)</th></tr><tr><th>Miralagos – Cuyalí</th><th>La Paz Centro – Malpaisillo</th></tr><tr><td>Van</td><td>0.24</td><td>0.24</td></tr><tr><td>Bus</td><td>0.74</td><td>0.65</td></tr><tr><td>Truck 10Tn</td><td>0.72</td><td>0.65</td></tr></table>            | Type of Vehicle             | VOC (US\$/Veh-km)              |  | Miralagos – Cuyalí | La Paz Centro – Malpaisillo | Van | 0.24  | 0.24  | Bus | 0.74  | 0.65  | Truck 10Tn | 0.72  | 0.65  | <table><tr><th rowspan="2">Type of Vehicle</th><th colspan="2">VOC (US\$/Veh-km)</th></tr><tr><th>Miralagos – Cuyalí</th><th>La Paz Centro – Malpaisillo</th></tr><tr><td>Van</td><td>0.16</td><td>0.17</td></tr><tr><td>Bus</td><td>0.48</td><td>0.43</td></tr><tr><td>Truck 10Tn</td><td>0.50</td><td>0.46</td></tr></table>           | Type of Vehicle | VOC (US\$/Veh-km)      |  | Miralagos – Cuyalí | La Paz Centro – Malpaisillo | Van | 0.16  | 0.17  | Bus | 0.48  | 0.43  | Truck 10Tn | 0.50  | 0.46  | Transit Study.<br>Specialized equipment (roughness meter).<br>Highway Development and Management (HDM-4).<br>Responsible agency: MTI   |
| Type of Vehicle                                                                                                                            | VOC (US\$/Veh-km)                                                                                                                                                                                                                                                                                                                         |                             |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
|                                                                                                                                            | Miralagos – Cuyalí                                                                                                                                                                                                                                                                                                                        | La Paz Centro – Malpaisillo |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
| Van                                                                                                                                        | 0.24                                                                                                                                                                                                                                                                                                                                      | 0.24                        |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
| Bus                                                                                                                                        | 0.74                                                                                                                                                                                                                                                                                                                                      | 0.65                        |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
| Truck 10Tn                                                                                                                                 | 0.72                                                                                                                                                                                                                                                                                                                                      | 0.65                        |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
| Type of Vehicle                                                                                                                            | VOC (US\$/Veh-km)                                                                                                                                                                                                                                                                                                                         |                             |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
|                                                                                                                                            | Miralagos – Cuyalí                                                                                                                                                                                                                                                                                                                        | La Paz Centro – Malpaisillo |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
| Van                                                                                                                                        | 0.16                                                                                                                                                                                                                                                                                                                                      | 0.17                        |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
| Bus                                                                                                                                        | 0.48                                                                                                                                                                                                                                                                                                                                      | 0.43                        |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
| Truck 10Tn                                                                                                                                 | 0.50                                                                                                                                                                                                                                                                                                                                      | 0.46                        |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
| Vehicle operating cost (van, bus and 10-ton truck) on road sections rehabilitated and maintained by the project (constant US\$/Vehicle-km) | <table><tr><th rowspan="2">Type of Vehicle</th><th colspan="2">VOC (US\$/Veh-km)</th></tr><tr><th>Jinotega–Miralagos</th><th>Jinotepe--Nandaime</th></tr><tr><td>Van</td><td>0.17</td><td>0.15</td></tr><tr><td>Bus</td><td>0.53</td><td>0.37</td></tr><tr><td>Truck 10Tn</td><td>0.53</td><td>0.40</td></tr></table>                     | Type of Vehicle             | VOC (US\$/Veh-km)              |  | Jinotega–Miralagos | Jinotepe--Nandaime          | Van | 0.17  | 0.15  | Bus | 0.53  | 0.37  | Truck 10Tn | 0.53  | 0.40  | <table><tr><th rowspan="2">Type of Vehicle</th><th colspan="2">VOC (US\$/Veh-km)</th></tr><tr><th>Jinotega–Miralagos</th><th>Jinotepe--Nandaime</th></tr><tr><td>Van</td><td>0.15</td><td>0.15</td></tr><tr><td>Bus</td><td>0.46</td><td>0.35</td></tr><tr><td>Truck 10Tn</td><td>0.48</td><td>0.38</td></tr></table>                    | Type of Vehicle | VOC (US\$/Veh-km)      |  | Jinotega–Miralagos | Jinotepe--Nandaime          | Van | 0.15  | 0.15  | Bus | 0.46  | 0.35  | Truck 10Tn | 0.48  | 0.38  | Transit Study.<br>Specialized equipment (roughness meter).<br>Highway Development and Management (HDM-4).<br>Responsible agency: FOMAV |
| Type of Vehicle                                                                                                                            | VOC (US\$/Veh-km)                                                                                                                                                                                                                                                                                                                         |                             |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
|                                                                                                                                            | Jinotega–Miralagos                                                                                                                                                                                                                                                                                                                        | Jinotepe--Nandaime          |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
| Van                                                                                                                                        | 0.17                                                                                                                                                                                                                                                                                                                                      | 0.15                        |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
| Bus                                                                                                                                        | 0.53                                                                                                                                                                                                                                                                                                                                      | 0.37                        |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
| Truck 10Tn                                                                                                                                 | 0.53                                                                                                                                                                                                                                                                                                                                      | 0.40                        |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
| Type of Vehicle                                                                                                                            | VOC (US\$/Veh-km)                                                                                                                                                                                                                                                                                                                         |                             |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
|                                                                                                                                            | Jinotega–Miralagos                                                                                                                                                                                                                                                                                                                        | Jinotepe--Nandaime          |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
| Van                                                                                                                                        | 0.15                                                                                                                                                                                                                                                                                                                                      | 0.15                        |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
| Bus                                                                                                                                        | 0.46                                                                                                                                                                                                                                                                                                                                      | 0.35                        |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
| Truck 10Tn                                                                                                                                 | 0.48                                                                                                                                                                                                                                                                                                                                      | 0.38                        |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
| Travel time (van, bus and 10-ton truck) on road sections improved by the project (average minutes per trip)                                | <table><tr><th rowspan="2">Type of Vehicle</th><th colspan="2">Travel time (Min/Trip)</th></tr><tr><th>Miralagos – Cuyalí</th><th>La Paz Centro – Malpaisillo</th></tr><tr><td>Van</td><td>12.51</td><td>75.68</td></tr><tr><td>Bus</td><td>15.93</td><td>80.79</td></tr><tr><td>Truck 10Tn</td><td>13.77</td><td>77.04</td></tr></table> | Type of Vehicle             | Travel time (Min/Trip)         |  | Miralagos – Cuyalí | La Paz Centro – Malpaisillo | Van | 12.51 | 75.68 | Bus | 15.93 | 80.79 | Truck 10Tn | 13.77 | 77.04 | <table><tr><th rowspan="2">Type of Vehicle</th><th colspan="2">Travel time (Min/Trip)</th></tr><tr><th>Miralagos – Cuyalí</th><th>La Paz Centro – Malpaisillo</th></tr><tr><td>Van</td><td>8.32</td><td>34.07</td></tr><tr><td>Bus</td><td>12.15</td><td>42.44</td></tr><tr><td>Truck 10Tn</td><td>10.16</td><td>37.82</td></tr></table> | Type of Vehicle | Travel time (Min/Trip) |  | Miralagos – Cuyalí | La Paz Centro – Malpaisillo | Van | 8.32  | 34.07 | Bus | 12.15 | 42.44 | Truck 10Tn | 10.16 | 37.82 | Transit Study.<br>Specialized equipment (roughness meter).<br>Highway Development and Management (HDM-4).<br>Responsible agency: MTI   |
| Type of Vehicle                                                                                                                            | Travel time (Min/Trip)                                                                                                                                                                                                                                                                                                                    |                             |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
|                                                                                                                                            | Miralagos – Cuyalí                                                                                                                                                                                                                                                                                                                        | La Paz Centro – Malpaisillo |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
| Van                                                                                                                                        | 12.51                                                                                                                                                                                                                                                                                                                                     | 75.68                       |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
| Bus                                                                                                                                        | 15.93                                                                                                                                                                                                                                                                                                                                     | 80.79                       |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
| Truck 10Tn                                                                                                                                 | 13.77                                                                                                                                                                                                                                                                                                                                     | 77.04                       |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
| Type of Vehicle                                                                                                                            | Travel time (Min/Trip)                                                                                                                                                                                                                                                                                                                    |                             |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
|                                                                                                                                            | Miralagos – Cuyalí                                                                                                                                                                                                                                                                                                                        | La Paz Centro – Malpaisillo |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
| Van                                                                                                                                        | 8.32                                                                                                                                                                                                                                                                                                                                      | 34.07                       |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
| Bus                                                                                                                                        | 12.15                                                                                                                                                                                                                                                                                                                                     | 42.44                       |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
| Truck 10Tn                                                                                                                                 | 10.16                                                                                                                                                                                                                                                                                                                                     | 37.82                       |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
| Travel time (van, bus and 10-ton truck) on road sections rehabilitated and maintained by the project (average minutes per trip)            | <table><tr><th rowspan="2">Type of Vehicle</th><th colspan="2">Travel time (Min/Trip)</th></tr><tr><th>Jinotega–Miralagos</th><th>Jinotepe--Nandaime</th></tr><tr><td>Van</td><td>10.40</td><td>20.42</td></tr><tr><td>Bus</td><td>14.61</td><td>21.43</td></tr><tr><td>Truck 10Tn</td><td>12.79</td><td>20.69</td></tr></table>          | Type of Vehicle             | Travel time (Min/Trip)         |  | Jinotega–Miralagos | Jinotepe--Nandaime          | Van | 10.40 | 20.42 | Bus | 14.61 | 21.43 | Truck 10Tn | 12.79 | 20.69 | <table><tr><th rowspan="2">Type of Vehicle</th><th colspan="2">Travel time (Min/Trip)</th></tr><tr><th>Jinotega–Miralagos</th><th>Jinotepe--Nandaime</th></tr><tr><td>Van</td><td>10.24</td><td>17.07</td></tr><tr><td>Bus</td><td>14.40</td><td>18.77</td></tr><tr><td>Truck 10Tn</td><td>12.69</td><td>17.74</td></tr></table>         | Type of Vehicle | Travel time (Min/Trip) |  | Jinotega–Miralagos | Jinotepe--Nandaime          | Van | 10.24 | 17.07 | Bus | 14.40 | 18.77 | Truck 10Tn | 12.69 | 17.74 | Transit Study.<br>Specialized equipment (roughness meter).<br>Highway Development and Management (HDM-4).<br>Responsible agency: FOMAV |
| Type of Vehicle                                                                                                                            | Travel time (Min/Trip)                                                                                                                                                                                                                                                                                                                    |                             |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
|                                                                                                                                            | Jinotega–Miralagos                                                                                                                                                                                                                                                                                                                        | Jinotepe--Nandaime          |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
| Van                                                                                                                                        | 10.40                                                                                                                                                                                                                                                                                                                                     | 20.42                       |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
| Bus                                                                                                                                        | 14.61                                                                                                                                                                                                                                                                                                                                     | 21.43                       |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
| Truck 10Tn                                                                                                                                 | 12.79                                                                                                                                                                                                                                                                                                                                     | 20.69                       |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
| Type of Vehicle                                                                                                                            | Travel time (Min/Trip)                                                                                                                                                                                                                                                                                                                    |                             |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
|                                                                                                                                            | Jinotega–Miralagos                                                                                                                                                                                                                                                                                                                        | Jinotepe--Nandaime          |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
| Van                                                                                                                                        | 10.24                                                                                                                                                                                                                                                                                                                                     | 17.07                       |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
| Bus                                                                                                                                        | 14.40                                                                                                                                                                                                                                                                                                                                     | 18.77                       |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |
| Truck 10Tn                                                                                                                                 | 12.69                                                                                                                                                                                                                                                                                                                                     | 17.74                       |                                |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                                                                                                                                                                                                                          |                 |                        |  |                    |                             |     |       |       |     |       |       |            |       |       |                                                                                                                                        |

| Outcome Indicators (**)                                                                     | Baseline (2011)                                                                                                                                                                                                                    | Target (2017)                                                                                                                                                                                                                        | Means of Verification/Comments                                                  |
|---------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| Average daily traffic volume on road sections covered by the project (Veh/Day)              | <ul style="list-style-type: none"> <li>• Miralagos – Cuyalí: 835 Veh/Day</li> <li>• La Paz Centro-Malpaisillo: 482 Veh/Day</li> <li>• Jinotega – Miralagos: 1,848 Veh/Day</li> <li>• Jinotepe – Nandaime: 2,263 Veh/Day</li> </ul> | <ul style="list-style-type: none"> <li>• Miralagos – Cuyalí: 1,126 Veh/Day</li> <li>• La Paz Centro-Malpaisillo: 681 Veh/Day</li> <li>• Jinotega – Miralagos: 2,663 Veh/Day</li> <li>• Jinotepe – Nandaime: 3,261 Veh/Day</li> </ul> | Transit study.<br>Responsible agencies: MTI and FOMAV                           |
| International Roughness Index-IRI (m/km)                                                    | <ul style="list-style-type: none"> <li>• Miralagos – Cuyalí: 14.1 m/km</li> <li>• La Paz Centro-Malpaisillo: 12.66 m/km</li> <li>• Jinotega – Miralagos: 6.7 m/km</li> <li>• Jinotepe – Nandaime: 3.5 m/km</li> </ul>              | <ul style="list-style-type: none"> <li>• Miralagos – Cuyalí: 2.82 m/km</li> <li>• La Paz Centro-Malpaisillo: 3.15 m/km</li> <li>• Jinotega – Miralagos: 3.27 m/km</li> <li>• Jinotepe – Nandaime: 2.3 m/km</li> </ul>                | Specialized equipment (roughness meter).<br>Responsible agencies: MTI and FOMAV |
| Number of traffic accident fatalities on the Jinotepe – Nandaime section per 100,000 Veh-km | 0.05397<br>(Average for 2008-2010, calculated in 2012)                                                                                                                                                                             | 0.05127<br>(Average for 2014-2016, calculated in 2018)                                                                                                                                                                               | Official information from MTI/Road Safety, based on national police data.       |

(\*\*) The baseline and target values will be updated as all works under Components 1 and 5 to be financed by the operation are included.

| Expected Outputs of the Project                                    |          |      |      |      |      |      |                          |                                                                                                     |
|--------------------------------------------------------------------|----------|------|------|------|------|------|--------------------------|-----------------------------------------------------------------------------------------------------|
| Component 1: Improvement of productive roads and the trunk network |          |      |      |      |      |      |                          |                                                                                                     |
| Output indicators                                                  | Baseline | 2012 | 2013 | 2014 | 2015 | 2016 | Cumulative target (2017) | Means of Verification/Comments                                                                      |
| Km of roadway improved by the project (2)                          |          |      |      |      |      |      |                          | Supervision reports.<br>Record of acceptance of the works.<br>Responsible agency: the MTI's IDB-PCU |
| • Miralagos - Cuyalí (7.47 km)                                     | 0        | 0    | 0    | 5.0  | 2.47 | 0    | 7.47                     |                                                                                                     |
| • La Paz Centro - Malpaisillo (37.2 km)                            | 0        | 0    | 0    | 8.0  | 12.0 | 17.2 | 37.2                     |                                                                                                     |

(2) Km improved: defined as kilometers of dirt or gravel road that have been paved.

| Expected Outputs of the Project                                                        |          |      |      |      |      |      |                          |                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|----------|------|------|------|------|------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Component 2: Institutional strengthening of MTI and FOMAV                              |          |      |      |      |      |      |                          |                                                                                                                                                                                                  |
| Output indicators                                                                      | Baseline | 2012 | 2013 | 2014 | 2015 | 2016 | Cumulative target (2017) | Means of Verification/Comments                                                                                                                                                                   |
| Number of weight and dimension control stations and installation of scales implemented | 0        | 0    | 0    | 3    | 0    | 0    | 3                        | Record of final acceptance of the works (two stations constructed: Ocotal and Los Cedros; and one improved: Mateare). Responsible agencies: Road Maintenance Bureau (DCV) and the MTI's IDB-PCU. |
| Number of institutional strengthening action plans implemented (3)                     | 0        | 0    | 0    | 0    | 0    | 0    | 1                        | Responsible agencies: the MTI's IDB-PCU and FOMAV.                                                                                                                                               |

(3) As a condition precedent to the first disbursement, the borrower will present an institutional strengthening action plan for efficient execution of IDB operations. As a special condition of execution, the MTI and FOMAV, as executing agencies, will implement the action plan agreed upon with the Bank. The means of verification will be determined once those activities are identified. "Implemented" means that all planned activities have been completed.

| Expected Outputs of the Project                   |          |      |      |      |      |      |                          |                                                                                                                                                |
|---------------------------------------------------|----------|------|------|------|------|------|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Component 3: Road safety                          |          |      |      |      |      |      |                          |                                                                                                                                                |
| Output indicators                                 | Baseline | 2012 | 2013 | 2014 | 2015 | 2016 | Cumulative target (2017) | Means of Verification/Comments                                                                                                                 |
| Number of road safety interventions completed (4) | 0        | 0    | 0    | 0    | 1    | 0    | 1                        | Record of final acceptance of the works (construction of bicycle paths and road safety works). Responsible agencies: DCV and the MIT's IDB-PCU |

(4) Interventions will be defined by the Road Safety Strategy to be financed under loan 2427/BL-NI. The means of verification will be determined once those interventions are identified.

| Expected Outputs of the Project                                                                              |          |      |      |      |      |      |                          |                                                                                                                                                |
|--------------------------------------------------------------------------------------------------------------|----------|------|------|------|------|------|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Component 4: Reduction of the road system's vulnerability to climate change                                  |          |      |      |      |      |      |                          |                                                                                                                                                |
| Output indicators                                                                                            | Baseline | 2012 | 2013 | 2014 | 2015 | 2016 | Cumulative target (2017) | Means of Verification/Comments                                                                                                                 |
| Intervention works on the Chinandega-Guasaule route designed in terms of vulnerability to climate change (5) | 0        | 0    | 0    | 0    | 1    | 0    | 1                        | Final reports of the engineering studies and final plans.<br>Responsible agencies: Environmental Management Bureau (DGA) and the MTI's IDB-PCU |

(5) The program will finance studies and designs for works to mitigate the effects of climate change on the Chinandega-Guasaule route.

| Expected Outputs of the Project                                                                                             |          |      |      |      |      |      |                          |                                                            |
|-----------------------------------------------------------------------------------------------------------------------------|----------|------|------|------|------|------|--------------------------|------------------------------------------------------------|
| Component 5: Road maintenance                                                                                               |          |      |      |      |      |      |                          |                                                            |
| Output indicators                                                                                                           | Baseline | 2012 | 2013 | 2014 | 2015 | 2016 | Cumulative target (2017) | Means of Verification/Comments                             |
| Km of road rehabilitated and maintained by the project (6)                                                                  |          |      |      |      |      |      |                          |                                                            |
| • Jinotega - Miralagos (11 km)                                                                                              | 0        | 0    | 8.0  | 3.0  | 0    | 0    | 11.0                     | Supervision reports.<br>Record of acceptance of the works. |
| • Jinotepe - Nandaime (22 km)                                                                                               | 0        | 0    | 10.0 | 9.0  | 3.0  | 0    | 22.0                     | Responsible agency: FOMAV                                  |
| Number of Road Maintenance Management System manuals (Environmental, Road Safety, and Occupational Health Control) prepared | 0        | 0    | 0    | 3    | 0    | 0    | 3                        | Final report from the study.<br>Responsible agency: FOMAV  |

(6) Kilometers rehabilitated and maintained: defined as kilometers of road covered by periodic maintenance.

| Expected Outputs of the Project                                                                                   |          |      |      |      |      |      |                          |                                                                                                                                                |
|-------------------------------------------------------------------------------------------------------------------|----------|------|------|------|------|------|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Component 6: Administration and management                                                                        |          |      |      |      |      |      |                          |                                                                                                                                                |
| Output indicators                                                                                                 | Baseline | 2012 | 2013 | 2014 | 2015 | 2016 | Cumulative target (2017) | Means of Verification/Comments                                                                                                                 |
| Number of preinvestment and engineering design studies for roads approved and available for tendering (7)         | 0        | 0    | 0    | 0    | 3    | 0    | 3                        | Studies, plans, and technical specifications approved.<br>Responsible agencies: General Planning Division (DGP) and the MTI's IDB-PCU          |
| Number of social and environmental management plans implemented in the protected area of Momotombo Volcano (8)    | 0        | 0    | 0    | 0    | 0    | 1    | 1                        | Record and list of technical assistance events for farmers/equipment acquired and operating<br>Responsible agencies: DGA and the MTI's IDB-PCU |
| Number of driver education plans implemented in the service areas of the road sections covered by the project (8) | 0        | 0    | 0    | 0    | 0    | 1    | 1                        | Record and attendance list /driver education events<br>Responsible agencies: DGA and the MTI's IDB-PCU and FOMAV                               |

(7) Road works projects that are outputs of this loan will serve as inputs for future operations.

(8) Interventions must comply with provisions of the Project Environmental and Social Management Plan.

## **FIDUCIARY AGREEMENTS AND REQUIREMENTS**

**Country:** Nicaragua

**Project name:** Transport Sector Support Program II

**Project number:** NI-L1052

**Executing agencies:** Ministry of Transport and Infrastructure (MTI) and Road Maintenance Fund (FOMAV)

**Prepared by:** Brenda M. Álvarez Junco, Fiduciary Specialist in Procurement (FMP/CNI), and Juan Carlos Lazo, Senior Fiduciary Specialist in Financial Management (FMP/CNI).

### **I. EXECUTIVE SUMMARY**

- 1.1 The fiduciary management assessment was based on the Institutional Capacity Assessment System (ICAS) reports relating to procurement and financial management applied to the MTI and FOMAV.
- 1.2 With respect to procurement, the quality of fiduciary management in Nicaragua is improving, but a number of measures are needed to make it compatible with best international practices and consistent with Bank policies. On the basis of the reports from the Assessment of Institutional Capacities in Procurement and the Institutional Capacity Assessment System (ICAS) produced during preparation of this operation, the level of risk assigned to the MTI units involved with fiduciary issues is medium. This executing agency has experience in implementing projects financed by the Bank: it is currently implementing operations 1796/SF-NI, 1530/SF-NI, 1599/SF-NI, 2225/BL-NI, and 2427/BL-NI, all of which are subject to ex ante review by the Bank of their procurement and disbursement processes. The risk level is similar for FOMAV, although in its case it lacks experience in implementing operations financed by the Bank. In terms of financial management, both executing agencies have complied with the majority of agreements indicated in the institutional strengthening matrix, which suggests that over the medium term the level of risk assigned to the two agencies could be revised.
- 1.3 There are no plans to include any financing sources other than the IDB in this program.

### **II. FIDUCIARY CONTEXT OF THE EXECUTING AGENCY**

- 2.1 The greatest strength of the MTI is the experience accumulated in the works and consulting services unit. That team has experience with procurement and a satisfactory level of execution. However, while the manual of organization and functions establishes the profile required for each position in the procurement

- division, not all team members meet the minimum qualifications required. It will be important to ensure staff retention and to strengthen the consistency of their profiles, as well as to prepare an on-boarding manual for new unit staff.
- 2.2 In the case of FOMAV, it has sufficient personnel but it needs strengthening in the procurement area, as it has never been responsible for implementing operations financed by the Bank. It will be provided with the necessary support, including training workshops that the Bank conducts in the area of procurement.
- 2.3 In financial management, MTI personnel also have significant experience in implementing IDB projects, but in the case of FOMAV the situation is different, and training and institutional strengthening are needed. In the time since the fiduciary annex for the previous transportation project was prepared, FOMAV staff have attended training sessions on financial management for projects financed by the Bank, but we believe that an ad hoc workshop should be held for MTI and FOMAV personnel in the third quarter of 2012.

### **III. FIDUCIARY RISK ASSESSMENT AND MITIGATION MEASURES**

- 3.1 In terms of procurement, the level of risk assigned to the procurement units of the MTI and FOMAV in the context of preparing this operation is medium. In order to improve that level the following is recommended: (i) ensure retention of personnel in the procurement units; (ii) with the increase in the MTI workload, it is recommended that the unit be strengthened with a procurement specialist who has the profile recommended by the Bank; (iii) with respect to the internal management of processes, during preparation of the technical requirements and specifications, both executing agencies must ensure that they take into account market considerations and delivery and execution deadlines and that they define objective evaluation criteria; (iv) in the case of the MTI, its procurement planning needs to be strengthened. The Bank will provide advisory services and ongoing support for the Procurement Plan Execution System (SEPA) managers of both executing agencies; and (v) it is recommended that the Operating Manual for this project provide details on the contract administration process.
- 3.2 Financial management requirements:
- (i) Before execution of the operations begins, staff of the financial unit should attend a training session, to be given by the Bank team, on Bank policies and procedures applicable to this type of process.
  - (ii) The MTI and FOMAV should agree to make a constant effort to carry out the actions agreed upon in the strengthening matrix from the ICAS performed for each of them, and the fiduciary risk mitigation measures indicated in the Project Risk Management (PRM) analysis.
- 3.3 In light of the foregoing, the overall fiduciary risk of the operation is medium.

#### IV. CONSIDERATIONS FOR THE SPECIAL PROVISIONS OF THE CONTRACTS

- 4.1 In order to facilitate contract negotiation by the project team, the following agreements and requirements should be reflected in the special provisions:
- 4.2 The loan contract must provide, as a condition of execution, that the two executing agencies implement, in due time and manner, the actions indicated in the action plans resulting from the institutional capacity assessment, both for procurement and for financial management.
- 4.3 Although the exchange rate to be used is a matter for the borrower to indicate during negotiations, it is recommended that the exchange rate in effect in the borrower's country on the date the funds were converted from foreign currency to córdobas by the executing agencies be used, in order to eliminate any exchange rate losses.
- 4.4 The financial specialist, by agreement with the TSP specialist, suggests removing the contractual condition requiring FOMAV to submit financial statements. It is also suggested that this agreement be used to amend that same requirement for the NI-L1049 agreement.

#### V. AGREEMENTS AND REQUIREMENTS FOR PROCUREMENT

- 5.1 Procurement under the project financed by the IDB and executed by the MTI and FOMAV will be conducted in accordance with the provisions of documents GN-2349-9 and GN-2350-9, as well as the provisions of the loan contract.

#### VI. PROCUREMENT EXECUTION

- 6.1 **Procurement of works, goods, and nonconsulting services:** Contracts for works, goods, and nonconsulting services<sup>1</sup> generated by the project will be included in the Initial Procurement Plan, and processes subject to international competitive bidding (ICB) will be executed using the standard bidding documents issued by the Bank. Procurement subject to national competitive bidding (NCB) will be executed using bidding documents agreed upon with the Bank. The project's sector specialist is responsible for reviewing the technical specifications of procurement during preparation of the selection processes.
- 6.2 **Selection and contracting of consultants:** Consulting services contracts generated under the project will be included in the Initial Procurement Plan and will be executed using the Standard Request for Proposals issued by the Bank, or agreed upon with the Bank. The project's sector specialist is responsible for reviewing the terms of reference for contracting consulting services. The plan is to use direct selection of the independent financial, technical, and environmental audits and the monitoring of the social and environmental variables of the

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<sup>1</sup> Policies for the Procurement of Goods and Works Financed by the Inter-American Development Bank (document [GN-2349-9](#)), paragraph 1.1: Nonconsulting services are treated like goods.

Acoyapa-San Carlos-Costa Rica Border project, in order to maintain homogeneity in the technical approach with contracts under execution during preparation of this operation.

**6.3 Selection of individual consultants:** This will take into account the consultants' qualifications to perform the work, based on a comparison of at least three candidates' qualifications. The project's sector specialist is responsible for reviewing the terms of reference for contracting consulting services. The plan is to engage individual consultants through direct contracting for the technical and environmental audits.

**6.4 National preference:** not applicable

## VII. TABLE OF THRESHOLDS

**7.1** As a result of the capacity assessment of the executing agencies (MTI/FOMAV) and on the basis of their execution performance and the result of ex post review visits in the context of other operations for which the MTI is the executing agency, the following amounts are recommended:

| EXPENDITURE<br>CATEGORY                 | AMOUNT IN<br>US\$ (000)        | PROCUREMENT<br>METHOD       | IDB REVIEW                                                                                                            |
|-----------------------------------------|--------------------------------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Works                                   | ≥1,500                         | ICB                         | Ex ante for all processes                                                                                             |
|                                         | <1,500 ≥ 150                   | NCB                         | Ex ante for all processes exceeding<br>US\$600,000 600.<br>Ex post for all processes equal to or below<br>US\$600,000 |
|                                         | < 150                          | Shopping                    | Ex post                                                                                                               |
| Goods                                   | ≥150                           | ICB                         | Ex ante for all processes                                                                                             |
|                                         | ≤150 > 25                      | NCB                         | Ex ante for all processes exceeding<br>US\$60,000.<br>Ex post for all processes equal to or below<br>US\$60,000.      |
|                                         | ≤ 25                           | Shopping                    | Ex post for all processes                                                                                             |
| Nonconsulting services                  | >150                           | ICB                         | Ex ante for all processes                                                                                             |
|                                         | ≤150 > 25                      | NCB                         | Ex ante for all processes exceeding<br>US\$60,000.<br>Ex post for all processes equal to or below<br>US\$60,000.      |
|                                         | ≤ 25                           | Shopping                    | Ex post                                                                                                               |
| Consulting firms                        | >200                           | International short<br>list | Ex ante for all processes                                                                                             |
|                                         | ≤200                           | National short list         |                                                                                                                       |
| Individual consultants                  | See Section V of doc GN-2350-9 |                             | Ex post for all processes                                                                                             |
| Direct contracting and direct selection |                                |                             | Ex ante for all processes                                                                                             |

Note: The thresholds for ex post review are based on the executing agencies' fiduciary capacity for execution and may be modified by the Bank as that capacity improves.

## VIII. MAIN PROCUREMENT ITEMS

| Description                                                                                                                            | Estimated amount<br>US\$000 | Estimated date | Procurement method |
|----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------|--------------------|
| <b>Goods</b>                                                                                                                           |                             |                |                    |
| Tools and equipment for fire prevention and control in the Momotombo Volcano protected area                                            | 17.25                       | February 2015  | Shopping           |
| <b>Works</b>                                                                                                                           |                             |                |                    |
| Road rehabilitation La Paz Centro –Malpaisillo (37.2 km)                                                                               | 22,536                      | January 2014   | ICB                |
| Road maintenance Jinotepe – Nandaime (22.0 km)                                                                                         | 5,500                       | May 2013       | ICB                |
| Road rehabilitation Miralagos – Cuyalí (7.47 km)                                                                                       | 3,657                       | October 2013   | ICB                |
| <b>Consulting firms</b>                                                                                                                |                             |                |                    |
| Preinvestment studies and designs for road works                                                                                       | 581                         | September 2013 | QCBS               |
| Program baseline: establishment of basic values for the program's overall outcome and socioeconomic impact indicators                  | 186                         | November 2012  | QCBS               |
| Studies and designs of works for reducing vulnerability to climate change on the Chinandega – Guasaule route                           | 232                         | May 2013       | QCBS               |
| Independent financial audit. Consulting services for review and analysis of program financial statements                               | 276                         | July 2013      | DC                 |
| Independent technical audit of the program. Services for technical review of engineering designs and for supporting works supervision. | 80                          | February 2013  | DC                 |
| Independent environmental audit of the program. Verification of implementation of the program's social and environmental strategy      | 50                          | February 2013  | DC                 |
| Monitoring of social and environmental variables for the Acoyapa-San Carlos- Costa Rican border project.                               | 116                         | December 2013  | DC                 |

\* for the 18 month procurement plan (PA<sub>18</sub>), click [here](#).

## IX. PROCUREMENT SUPERVISION

- 9.1 Ex post reviews will be conducted semiannually in accordance with the project supervision plan. The ex post review reports will include at least one physical inspection visit,<sup>2</sup> selected from among the procurement processes subject to ex post review. At least 10% of contracts reviewed must be inspected physically.

<sup>2</sup> The inspection will verify the existence of the procurement, leaving it to the sector specialist to verify quality and compliance with specifications.

## **X. RECORDS AND FILES**

- 10.1 Each procurement unit is responsible for procurement record-keeping and management, and will designate an individual responsible for this activity, have a specific area for document safekeeping, and ensure that documentary evidence of payments made to suppliers and contractors is recorded in the files. The physical files must be kept for a period of three years.

## **XI. FINANCIAL MANAGEMENT**

### **1. Programming and budget**

- 11.1 The two executing agencies will use SIGFA-PRO (Integrated Financial and Administrative Management of Projects) for financial management of the operation. This process is likely to require some form of assistance from the Bank. If there is any change or improvement in the SIGFA project administration module, it is assumed that the operation would automatically migrate to the changed or improved version.

### **2. Disbursements and cash flow**

- 11.2 The IDB will disburse funds to the project through the Central Bank of Nicaragua to accounts opened for this operation. There will be no accounts opened in commercial banks. Funding will be provided in the form of advances for up to a maximum of six months, depending on the project's liquidity needs. New advances will be processed once a rendering of accounts has been received for at least 80% of the previous advance. Documentation in support of disbursements must be sent to the Bank by electronic means. It is suggested that two suboperations should be recorded in the WLMS so that the performance of one executing agency does not affect that of the other in terms of accountability.
- 11.3 The executing agencies must have a financial plan, which will be aligned with the execution and procurement plans.
- 11.4 At the request of the government, cash flows will include the payment of interest during the execution period with funds from the loan. The executing agencies are estimated to set aside US\$950,000 for this item. As this is a "blend" operation, interest cannot be automatically capitalized, but must be handled via the same process as any other eligible expenditure.

### **3. External control and reports**

- 11.5 The CGR (Office of the Comptroller General) is not currently accepted by the Bank for auditing financial statements. Accordingly, the executing agencies will have to contract the services of an independent audit firm, in accordance with Bank policies.
1. Given the complexity of the operation, an eligibility category I independent audit firm will be required. The Bank will consider retaining the firm that has been auditing the other operations executed by the MTI.
  2. For this operation the Bank will request annual audited financial statements.

3. The cost of auditing services for this operation is expected to range between US\$120,000 and US\$150,000, and will be financed with IDB funds. It is suggested that the same independent audit firm that has been auditing all the operations executed by the MTI be engaged.

#### **4. Financial supervision plan**

- 11.6 The project will initially operate under the ex ante modality for reviewing disbursements. In addition, and for purposes of monitoring financial management and the control environment in the executing agencies, semiannual inspection visits will be made during the first year. Those visits will monitor the strengthening plan agreed upon in the ICAS and the PRM.