



**Inter-American
Development Bank**

VPS / ESG

TECHNICAL NOTE

No. IDB - TN - 450

**The Environmental and
Social Impacts of Major
IDB-Financed Road
Improvement Projects:
The Interoceanica IIRSA
Sur and IIRSA Norte
Highways in Peru**

John Redwood

November 2012

The Environmental and Social Impacts of Major IDB-Financed Road Improvement Projects: The Interoceanica IIRSA Sur and IIRSA Norte Highways in Peru

John Redwood



Inter-American Development Bank

2012

Cataloging-in-Publication data provided by the
Inter-American Development Bank
Felipe Herrera Library

Redwood, John.

The environmental and social impacts of major IDB-financed road improvement projects: the
interoceanica IIRSA Sur and IIRSA Norte highways in Peru / John Redwood.

p. cm. (IDB Technical Note; 450)

Includes bibliographical references.

1. Environmental risk assessment—Peru. 2. Inter-American Development Bank—Evaluation. 3. Roads—
Design and construction—Social aspects. 4. Roads—Design and construction—Environmental aspects. I.
Inter-American Development Bank. Environmental and Social Safeguards Unit. II. Title. III. Series.

JEL Codes Q51 Q56 R42

<http://www.iadb.org>

The opinions expressed in this publication are those of the authors and do not necessarily
reflect the views of the Inter-American Development Bank, its Board of Directors, or the
countries they represent.

The unauthorized commercial use of Bank documents is prohibited and may be punishable under
the Bank's policies and/or applicable laws.

Copyright © 2012 Inter-American Development Bank. All rights reserved; may be freely
reproduced for any non-commercial purpose.

This Technical Note was prepared by the Environmental and Social Safeguards Unit (VPS/ESG) of the Inter-American Development Bank (IDB). ESG works to promote the environmental and social sustainability of Bank operations. It collaborates with project teams to execute the IDB's commitment of ensuring that each project is assessed, approved and monitored with due regard to environmental, social, health and safety aspects, and that all project – related impacts and risks are adequately mitigated or controlled. ESG also helps the Bank respond to emerging sustainability issues and opportunities.

This manuscript documents the experience of the Inter-American Development Bank in managing the environmental and social impacts of road improvement and road-related projects along two major transport corridors in Peru, IIRSA Sur and IIRSA Norte, and presents lessons and recommendations on how such impacts can best be identified, assessed and addressed in large ecologically sensitive and socio-culturally diverse areas.

This document was prepared under the supervision of Janine Ferretti, Chief of the Environmental and Social Safeguards Unit (VPS/ESG). The author was John Redwood III, consultant. Insightful inputs were provided by Ernesto Monter Flores and Juan Carlos Paez Zamora. Editorial support was supervised and provided by Gabriela Infante and Iona Hawken.

Contents

| | |
|--|----|
| Acronyms | 1 |
| Executive Summary | 3 |
| I. Bank-Financed Road Improvements along the IIRSA Sur/Interoceanica Highway | 5 |
| II. The Roads Rehabilitation and Improvement Project III (PE-L-0197)..... | 7 |
| III. The Decentralized Rural Transportation Project (PE-L-1011)..... | 11 |
| IV. The National Highway System Serviceability Improvement Project (PE-L-1006)..... | 12 |
| V. The Border Crossing Improvements Projects (PE-T-1008 and PE-L-1003)..... | 16 |
| VI. The Conservancy and Sustainable Development Project (PE-M-1056/PE-T-1137)..... | 18 |
| VII. Potential Adverse Environmental and Social Impacts of the Interoceanica Highway: Two Critical Views and a Rejoinder | 25 |
| VIII. Bank Guarantee for the IIRSA Norte Project (PE-L-1010) | 35 |
| IX. Design and Conditions of the Bank Guarantee..... | 36 |
| X. The Strategic Environmental Assessment (SEA) | 44 |
| XI. Lessons from the Interoceanica/IIRSA Sur and IIRSA Norte Experiences in Peru | 51 |
| Annex 1: The Decentralized Rural Transportation Project -- PE-L-1011 | 59 |
| Annex 2 Components of the Integrating Conservancy and Sustainable Development in Southern Interoceanic Highway Corridor Project (PE-M-1056/RE-T-1157) | 65 |

Acronyms

| | |
|-----------------|---|
| CAF | Andean Development Corporation |
| CCLIP | <i>Línea de Crédito Condicional para Proyectos de Infraestructura</i> |
| CAO | <i>Certificado de Avance de Obras</i> |
| CONIRSA | Concesionaria Interoceanica Sur |
| CI | Conservation International |
| CVAN | <i>Amazonas Norte Road Corridor</i> |
| DGASA | <i>Dirección General de Asuntos Socioambientales</i> |
| DRTP | Decentralized Rural Transportation Project |
| EAE | <i>Evaluación Ambiental Estratégica</i> |
| EASE | Environmental and Social Evaluation Methodology |
| EIA | Environmental Impact Assessment |
| ESMF | Environmental and Social Management Framework |
| ESMP | Environmental and Social Management Plan |
| ESR | Environmental and Social Review |
| EU | European Union |
| FESM | Environmental and Social Management Framework |
| FONDAM | The Americas Fund |
| FOMIN | <i>Fondo Multilateral de Inversiones</i> |
| FONPLATA | Plate River Basin Financial Development Fund |
| GIS | Geographic Information System |
| GoP | Government of Peru Italian Trust Fund for International |

| | |
|----------------------|--|
| ICR | Competitiveness |
| IDB | Inter-American Development Bank |
| IIRSA | Regional Infrastructure Initiative for South America |
| INRENA | National Institute of Natural Resources |
| LDC | Local Development Center |
| MIF | Multilateral Investment Fund |
| MTC | Ministry of Transportation and Communication |
| NAFTA | North American Free Trade Agreement |
| PCR | Project Completion Report |
| PCR | Rural Roads Program |
| PCU | Project Coordination Unit |
| PTRD | Peru: Decentralized Rural Transportation Program |
| PPP | Public-Private Partnership |
| PROINVERSION | Agency for the Promotion of Private Investment |
| PRONATURALEZA | Peruvian Association for the Conservation of Nature |
| PVD | <i>Provias Descentralizado</i> |
| PVPP | Participatory Provincial Road Plans |
| RVN | National Highway System |
| SEA | Strategic Environmental Assessment |
| S-EMP | Socio-environmental Management Plan |
| SGC | Highway Management System |
| SGIV | Highway Infrastructure Management System |
| SNIP | National System of Public Investment |
| TC | Technical Cooperation |
| WWF | World Wildlife Fund |

Executive Summary

Over the past decade, the IDB has been involved in several significant road improvement and road-related projects in Peru. These include the upgrading of various highland sections of what is known as the IIRSA Sur or “Interoceanica” Highway, ultimately connecting the Atlantic coast of Brazil with the Pacific coast of Peru, border crossing improvements at Iñapari between Brazil and Peru, and Multilateral Investment Fund (MIF) and (Bank-administered) Italian Trust Fund for International Competitiveness (ICR) operations to help address some of the potential indirect environmental impacts and take advantage of some of the new economic opportunities associated with pavement of the Amazonian portions of this road in southeastern Peru. The Bank has also provided a Guarantee for upgrading and partial construction of the parallel IIRSA Norte highway, which also crosses part of the ecologically and culturally sensitive Amazon region further to the north. Greater physical and economic integration, as well as the facilitation of increased regional trade with Asia, is a key objective of both of these major road corridors and, as their names suggest, they are important components of the Regional Infrastructure Initiative for South America (IIRSA). Launched in 2000, the IDB has been – and will continue to be – one of three regional multilateral agencies responsible for assisting in the technical coordination and financing of IIRSA projects, which are mainly for large infrastructure.

The present case study examines how the Bank has approached the potential environmental and social impacts associated with these road improvement and road-related projects along these two major transport corridors in Peru. In doing so, the Bank has used different instruments – direct road improvement loans, technical cooperation/grant funding, and a guarantee. It has been involved in improving sections of the IIRSA Sur highway system through several national road upgrading projects that include interventions in other parts of the country as well. It is also attempting to help promote biodiversity conservation and sustainable development along a critical section of the Interoceanica even though it is not involved in financing the road construction work *per se*. However, despite the existence of a comprehensive Strategic Environmental Assessment (SEA) for IIRSA Norte, the Bank has not considered either of these road corridors – for analytical and/or planning and implementation purposes or for environmental and social management -- as a whole, or in a more holistic way.

The Interoceanica highway has recently been completed and passenger and freight vehicle traffic can literally now travel over land across South America from coast to coast, but IIRSA Norte is still under development and, even when the road project is finished, substantial port and river navigation improvements will still be required, involving considerable additional time and investments, before it too will link the Atlantic and the Pacific Oceans through a multimodal transport network. This notwithstanding, key lessons have been – and can be -- learned from the Bank’s evolving experience with these two major road integration projects in Peru. Among the most important of these lessons, which are also of relevance for similar road improvement projects elsewhere, are the following:

- There is a need to start with a clear and explicit definition of the road’s direct and indirect areas of influence.
- In considering and assessing indirect project environmental and social impacts, especially in ecologically and socio-culturally diverse and sensitive areas such as those crossed by the Interoceanica and IIRSA Norte highways, there needs to be a one to one geographic or spatial correspondence between the projects’ anticipated physical and economic benefits and their potential environmental and social costs, both direct and indirect.
- As an SEA was performed in the case of IIRSA Norte, the financing agencies -- including the IDB as Guarantor -- should clearly and completely spell out its results and recommendations in their respective project documents and support the consistent and effective implementation of the latter during both the construction and operation phases of the project, including through specific contractual conditions in this regard.
- Bank-supported projects that involve major improvements (i.e., construction and/or paving) to extensive trunk roads, such as the Interoceanica and IIRSA Norte highways, whether these are part of an international highway link or not, are likely to result in significant induced local and regional development impacts, both positive and negative.
- Addressing these impacts, as the SEA for IIRSA Norte clearly indicates, will require a broad range of socio-economic, environmental, and other measures (e.g., territorial and land use planning, institutional capacity building, etc.) in the projects’ direct and

indirect areas of influence over the short, medium, and longer terms in the form of multi-sectoral and multi-institutional regional sustainable development programs.

- There is also a need to take cumulative indirect environmental and social impacts into account in projects involving many small road segments and/or when other major infrastructure and productive investments are taking place within or planned for the projects' respective direct and indirect areas of influence.
- In cases where improvements to a major road corridor are being undertaken – again, independently of whether it is a national, as in the case of IIRSA Norte, or an international one, as in the Interoceanica – good practice suggests that these transport investments should be incorporated, both for strategic planning and subsequent implementation, including for social and environmental risk and impact identification, assessment, management, and mitigation purposes, as part of more comprehensive multi-sector “economic” or “development” corridor programs.

I. Bank-Financed Road Improvements along the IIRSA Sur/Interoceanica Highway

Launched in 2000, the IDB has helped to coordinate and finance the Regional Infrastructure Initiative for South America (IIRSA), together with the Andean Development Corporation (CAF) and the Plate River Basin Financial Development Fund (FONPLATA), which, at least until very recently,¹ jointly constituted the Technical Committee providing support to this multi-country initiative.² These road corridors are the centerpieces of two of the ten IIRSA “integration and development axes” or “hubs,” for “Peru, Bolivia, Brazil” (i.e., IIRSA Sur) and the “Amazon Region” (IIRSA Norte), respectively.³

The IIRSA Sur/Interoceanica highway is part of a very ambitious national road investment plan in Peru that involves construction of three longitudinal (i.e., also including IIRSA Central and IIRSA Norte) and twenty transversal highways. Altogether, the IIRSA Sur undertaking entails the construction or upgrading of some 2,600 kilometers of roadways that link

¹ The Bank's former coordinator for IIRSA has recently left the institution and it is presently not clear what arrangements, if any, have been made for his succession or even continuation of the Bank's participation in program coordination. To date he has not been replaced.

² See Inter-American Development Bank, *A New Continent under Construction: A Regional Approach to Strengthen the Infrastructure of South America – Regional Infrastructure Integration Initiative for South America (IIRSA)*, Washington D.C., 2006.

³ *Ibid.*, pp. 18-19.

the Peruvian ports of San Juan de Marcona, Matarani and Ilo, south of Lima/Callao, to southwestern Acre in western Brazil. Eventually, this highway also connects to the cities of Santos, near São Paulo, and Rio de Janeiro (and everywhere in between) through the existing paved national road network in Brazil. Thus it ultimately links major ports on the Atlantic coast of South America to ones on the Pacific Ocean, permitting cargo from Brazil to travel over land across the continent, thereby avoiding the need for shipping either around Cape Horn or through the Panama Canal, while also having potentially significant local development benefits (and costs) along its route, especially in Peru (as the required road improvements in Brazil have already been in place for some time, partly with IDB support).⁴

The Peruvian section of the Interoceanic highway has several branches and has been divided into various segments for operational purposes, a number of which have already been improved as part of separate projects, including some intermediate sections in the highlands (or *sierra*) with IDB financing (see below). Three concessions for other sections were awarded to private operators in 2005: (1) Urcos (near Cusco) to Inambari, in Inambari District near Puerto Maldonado in the Amazon Basin, involving some 300 kilometers of previously unpaved roads; (2) Inambari to Iñapari in Iñapari District on the Brazilian border opposite Assis Brasil in Acre, entailing 403 kilometers of previously unpaved roads; and (3) Azangaro-Inambari involving 306 kilometers of previously unpaved roads. These roads were leased to specialized Peruvian and Brazilian consortia of private companies for 25 years.⁵ Two other concessions further west between the coast and the highlands were awarded in 2007: (1) San Juan de Marcona, on the Pacific Ocean, to Nazca, Abancay, Cusco and Urcos, involving 763 kilometers of previously paved roads; and (2) branch 1 from Matarani, on the Pacific Ocean, to Arequipa, Juliaca (near Lake Titicaca between Peru and Bolivia) and Azangaro, and branch 2 from Ilo, also on the Pacific coast, to Moquegua, Humajalso, Puente Gallatini, Puno and Juliaca, which together entail 752 kilometers of previously paved roads and 62 kilometers of previously unpaved ones.

As indicated above, the Bank had previously agreed to finance the upgrading of two non-Amazonian segments of one major branch of the Interoceanica Highway -- between Puno, on Lake Titicaca, and Cuzco -- under two different loans, PE-L-0197 and PE-L-1006, and has

⁴ For a discussion of the Bank's road improvement and sustainable development projects in Acre, see John Redwood, *Managing the Environmental and Social Impacts of Major IDB-Financed Road Improvement Projects in the Brazilian Amazon; The Case of BR-364 in Acre*, consultant's report, Washington D.C., July 2011.

⁵ The concession for the first two of these road segments was awarded to the same consortium led by Odebrecht of Brazil.

possibly also benefited other areas within this corridor through PE-L-1011, jointly financed with the World Bank, for a national rural roads improvement project (see Map 2 at the end of the report). IDB is also financing border crossing improvements in Iñapari, on the Acre River which separates Peru from Brazil (and in two other border crossing areas further south in Peru with Bolivia and Chile, respectively), as well as some of the environmental mitigation measures associated with construction and pavement of the Amazonian portions of the Interoceanica Highway, although not the actual road improvements themselves, which, as previously noted, are being partly financed by CAF. These projects and their respective environmental and social safeguard and management measures and/or components will be further considered below.

II. The Roads Rehabilitation and Improvement Project III (PE-L-0197)

The Bank loan for Stage III of the Roads Rehabilitation and Improvement Project (PE-L-0197) was approved in December 1998 and completed in September 2007. This global multiple works project involved an estimated total cost of US\$ 500 million to be partially financed by a Bank loan of US\$ 300 million, of which close to US\$ 150.4 million was subsequently canceled due to a combination of political and economic difficulties and procurement delays (see below). Its stated objectives were to: (i) develop an extensive region of the Peruvian highlands by improving its road infrastructure and linking it to the more dynamic economy of the coast; (ii) improve the programming of road investments; (iii) encourage private involvement through the promotion of highway concessions; and (iv) boost the capacity of the Ministry of Transportation and Communication (MTC) to administer the highway sector. To achieve these objectives, the project had four components: (i) road rehabilitation and improvements (with an anticipated total cost of US\$ 339.5 million); (ii) pre-investment studies and works supervision (US\$ 51.5 million); (iii) support for highway concessions (US\$ 30 million); and (iv) institutional development of MTC's sector planning and policy-making capacity (US\$ 6.5 million). The first component was expected to finance the upgrading and rehabilitation of 437 kilometers of selected roads in the departments of Junin, Cuzco, Huancavelica, and Ayacucho, including construction of bypasses around two cities. One of these road segments was the 96 kilometer section of the IIRSA Sur highway between Cuzco and Combapata, which was expected to

involve a total cost of US\$ 49 million.⁶ The second component included financing for environmental and social impact assessments together with technical, economic and financial feasibility studies and final engineering designs. The fourth component was to include an analysis of existing environmental units and preparation of a proposal for their reorganization. It also included transportation policy and planning studies, preparation of a pilot plan for the establishment and recuperation of rights-of-way, definition of technical specifications for highway construction, and a study on the transportation of hazardous materials.⁷

According to the Executive Summary of the loan proposal document, this operation contained “measures to ensure its environmental and social validity,” although exactly what this statement means is not clear. The Summary observed further that all subprojects would “have environmental impact studies and management plans and, if necessary, resettlement plans.”⁸ It also affirmed that “the main impact will be felt during construction, particularly as a result of opening up borrow and dump sites and establishing work camps and other contractor facilities.”⁹ With respect to project benefits, however, the same document states that “the proposed program will support the economic development and integration of an extensive region in the Peruvian highlands, which will favor the return of emigrants by creating new productive opportunities.”¹⁰ But there is no indication in the loan proposal as to whether – or to what extent -- the potential indirect environmental and social impacts of the proposed road improvements in the “extensive region” that the project sought to benefit, including those resulting from the desired induced local development, were identified, assessed, and taken into account in the aforementioned EIA

⁶ The other sections to be improved and/or rehabilitated were the Huancayo-Imperial-Izacucha road and the Ayacucho-Imperial road; bypasses would also be constructed at La Oroya and Urcos, which is also on the IIRSA Sur road between Cuzco and Combapata.

⁷ See Inter-American Development Bank, *Highway Improvement and Rehabilitation Program – Stage III*, Loan Proposal, Washington D.C., November 10, 1998, Executive Summary and project description on IDB External Website.

⁸ It does appear that some involuntary resettlement was considered likely along the Cuzco-Combapata section to be upgraded, as one of the conditions prior to first disbursement in the Loan Agreement was “contracting of services to implement and monitor the compensation and resettlement plan” for this part of the project. Other relevant legal conditions were: (i) the undertaking of environmental and social impact assessments prior to first disbursement for the highway concession component; (ii) the presentation of design standards and technical, environmental and social specification and road safety requirements six months after loan effectiveness; and (iii) establishment of MTC’s Environment Unit and environmental training twelve months after effectiveness.

⁹ *Ibid.*, pg. 2.

¹⁰ *Ibid.*, pg. 2. It also observed that the project “will reduce vehicle operating costs and travel times by at least 25%, which will allow for a larger and more varied supply of passenger and freight services. It will also improve investment programming by consolidating effective capacity to prepare and execute projects and will support the private sector by allowing for its participation in highway management under a system of concessions.”

studies and management plans. Nor are the potential direct and indirect environmental and social impacts of the road improvements identified as being among project risks.¹¹

Based on the contents of the loan proposal document, in short, it does not appear that the indirect and induced development environmental and social impacts in the larger areas of influence of the road segments to be upgraded under the project were, in fact, taken into account in the associated Environmental Impact Assessments (EIAs) and environmental management plans. As in the Executive Summary, the text of this report limits itself to the following statements under the heading of “Expected Environmental Impact”:

The main environmental impacts will occur in the construction stage, particularly when borrow and dump sites are opened up, and camps and other construction facilities are set up. The environmental analysis of the projects should include environmental control and monitoring measures for the works, covering procedures to protect archaeological heritage and detailed plans for environmental recovery in all borrow and dump sites. The costs of measures to control and monitor the works will be included in the respective budgets.

The program will include the identification and cleaning up of any critical environmental problems along the rights-of-way and their environs.¹²

As noted above, the project included a number of subcomponents and legal conditions that sought both to strengthen the implementing agency’s capacity to improve its environmental management of road investments and carry out any required involuntary resettlement and to develop and apply environmentally sensitive design standards, construction/upgrading procedures, and monitoring and supervision. More concretely, in addition to requiring the preparation of EIAs and environmental management plans for each major road segment to be upgraded, the project reportedly contained “activities to: (i) guarantee the inclusion of environmental and social procedures in the subprojects and monitor their implementation; (ii) establish coordination with the environmental authorities, and (iii) train the MTC’s road agencies in environmental and social aspects.”¹³

¹¹ Ibid., pg. 3-4. These refer only to: (i) resistance to institutional change in the highway sector; and (ii) lack of private sector interest in the highway concession program.

¹² Ibid, paras. 3.43-3.44, pg. 27. What “their environs” refers to in operational terms is not clarified however.

¹³ Ibid., para. 5.18, pg. 41.

Even though the Bank approved an EIA for this project in December 1998, which is available in hard copy at its Public Information Center, the appraisal report *per se* provides no information about its specific findings and recommendations. Moreover, no provision to identify, assess and/or mitigate indirect impacts in the larger areas of influence of the roads to be improved – or even to identify such areas – is explicitly mentioned in the project report. This contrasts sharply with both earlier and subsequent Bank-financed road upgrading projects in the western Brazilian Amazonian state of Acre, where both the indirect areas of influence of the road segments to be improved and the potential direct and indirect environmental and social impacts of these projects, including on local indigenous communities, during both the construction and subsequent “operation” phases of the improved roads were assessed and measures to address them identified and reportedly implemented at the Bank’s request.¹⁴ Given that the majority of the residents of the Peruvian highlands are indigenous, the vast majority of which are also poor,¹⁵ it is also striking that no mention is made of this fact anywhere in the loan proposal document. Nor did the project contain measures to ensure that potentially affected indigenous communities would not be harmed and/or that they would be specifically benefited under the operation, other than, together with the rest of the local population, through the improved access and lower transportation costs resulting from the road improvements themselves. Again, the contrast with the IDB’s approach in Acre, in the Brazilian Amazon, which included specific measures to protect and benefit local indigenous populations, is noteworthy.

The Project Completion Report (PCR) for this operation, dated September 2008, provides some information on its implementation and results. The project took four years longer than originally expected to carry out due largely to a combination of external and internal factors including an unforeseen national political crisis in 2000-01, an earthquake, national budgetary constraints, and significant procurement delays, which led to its restructuring and cancelation of 50% of the original loan. Protests at some of the project road sites were apparently also a cause of delays, although the PCR does not provide details in this regard. The restructuring of project road improvement works, however, did not affect the 97 kilometer IIRSA Sur section between

¹⁴ See Redwood, *Managing Environmental and Social Impacts.....*, *op. cit.*

¹⁵ It does affirm, however, that, while the project did not qualify as a poverty reduction program, “it will benefit a large number of low-income rural communities and small production and consumption centers located in the vicinity of the rehabilitated roads.” It also states: “the project is not specifically oriented to the promotion of women either. However, it will improve access to social services such as hospitals and schools, which is a larger proportional benefit for this segment of the population.” IDB loan proposal, *op. cit.*, paras. 5.20-5.21, pg. 41.

Cuzco and Combapata, which went ahead as originally planned, albeit with considerable delays. But the proposed bypass around Urcos was dropped, as was improvement of another major road section (257 kilometers between Ayacucho and Imperial), while several new road segments that had not been part of the initial design were added.¹⁶ The rationale for these changes, in addition to the resource cuts, was primarily to give greater emphasis to improving road links between the highlands and the Pacific coast. The PCR, which focuses largely on technical aspects, contains nothing regarding the environmental and social impacts of the project and how they were handled even along the immediate rights-of-way of the road segments that were upgraded and/or rehabilitated. Nor does it comment on any needed resettlement or with respect to the project's various environment-related institutional strengthening components.¹⁷ This represents a significant weakness of the PCR.

III. The Decentralized Rural Transportation Project (PE-L-1011)

The Decentralized Rural Transportation Project (DRTP, PE-L-1011) was approved in November 2006 and is reportedly still under implementation. It was jointly prepared with and financed by the World Bank, as part of an ongoing collaboration in the rural roads sector in Peru. The project involves a US\$ 50 million IDB loan, of which more than three-quarters has been disbursed to date, according to the Bank's external website. Its objective is "to make public, economic, and social services physically more accessible to the rural population by improving local road systems."¹⁸ Although this is not specifically mentioned in the loan proposal, among the rural roads that have been or may be improved under project are local roads in the larger area of influence of the Interoceanica Highway and/or IIRSA Norte.¹⁹ As this operation may not

¹⁶ Inter-American Development Bank, *Informe de Terminación de Proyecto: Rehabilitación y Mejoramiento de Carreteras*, Lima, Peru, September 2008. See the Table on pg. 5 for the changes in the road improvement component.

¹⁷ *Ibid.*, Annex II, page 12. With respect to "environmental themes in the transport sector," in the PCR Annex that describes results under the project's institutional strengthening component, other than observing that the project supported "the consolidation of socio-environmental management capacity in the sector," the only statement was "a pilot plan for the recuperation of rights of way was developed as were socio-environmental management capacities and a system of sanctions and incentives related to environmental themes. Here there were three consultancies." The undertaking of a "strategic environmental evaluation for department road projects" is also mentioned but no details are provided.

¹⁸ Inter-American Development Bank, *Peru: Decentralized Rural Transportation Program (PTRD) (PE-L1011)*, Washington D.C., November 2006. Project Summary. The World Bank also provided a loan for US\$ 50 million toward the project's estimated total cost of US\$ 150 million.

¹⁹ *Ibid.*, para. 3.8, pg. 17. As concerns the project's geographic coverage, more generally, the Bank's appraisal report observes that it will "take action" in all parts of the country except metropolitan Lima-Callao, but "in the low-lying provinces of the rain forest, where the only activity has been a pilot project, currently in execution, only actions

significantly affect traffic along the IIRSA Sur trunk road itself, even though it could have substantial localized positive economic and other impacts, as well as adverse direct, indirect and cumulative environmental effects that need to be properly identified, assessed, and addressed, further discussion of the project is contained in Annex 1.

IV. The National Highway System Serviceability Improvement Project (PE-L-1006)

The National Highway System Serviceability Improvement Project (PE-L-1006, hereafter “the project”) was approved, together with a contingent US\$ 486 million credit line for investment projects (CCLIP) for the National Highway System’s Five Year Infrastructure Program for 2006-2010 (hereafter “the program”), in December 2006 – or just after the aforementioned DTRP was approved -- and signed in August 2007. The project is still under implementation with slightly over half of the US\$ 100 million IDB loan disbursed to date, according to the Bank’s external website. The loan proposal document for these two operations states that their general objective is to “make the Peruvian economy more competitive through a sustainable increase in the serviceability of the national highway system (RVN), mainly by improving the condition of the network’s paved and unpaved roads, particularly through maintenance and conservation.” Their specific objectives are to: (i) increase the percentage of good roads in the RVN through rehabilitation and improvement of unpaved roads and rehabilitation of paved roads in average and poor condition; (ii) expand the maintenance targets for the RVN; (iii) improve accessibility as a means of increasing integration between different regions of the country; (iv) give physical continuity to road corridors; and (v) strengthen the management capacity of Provías Nacional (PVN, or the Special National Transportation Infrastructure Project, which began operating in mid-2002) as the agency responsible for the RVN.”²⁰ One of the road sections reportedly improved – or to be upgraded -- under this project –

linked to component 2 [i.e., local capacity development] will be pursued until a methodology for appropriate action is developed.” This component, more specifically, is intended to “develop, improve, and strengthen the capacity of local governments so that they can assume efficient decentralized management.”(para. 2.8, pg. 12).

²⁰ Inter-American Development Bank, *Peru: CCLIP: National Highway System Five Year Infrastructure Program (2006-2010) (PE- X1001) and National Highway Serviceability Improvement Program (PE-L1006) Loan Proposal*, Washington D.C., December 18, 2006, paras. 2.1-2.2, pg. 12. This report also observes that “the scope of the credit line covers all RNV-related activities covered by the MTC, namely construction; expansion; improvements; rehabilitation; periodic and routine maintenance; emergency road work; road safety; pilot plans and innovation; supervision, monitoring and evaluation of works and studies; prefeasibility and final studies; socio-environmental management plans and studies; engineering designs; planning studies; and road management and institutional strengthening activities.”(para. 2.3, pp. 12-13)

extending from Carretera Sicuan to Juliaca via Santa Rosa and Pucará -- is also on that part of the Interoceanica/IIRSA Sur Highway that connects Puno and Cuzco, although located closer to Puno than the section improved under PE-L-0197 described above.

The joint loan proposal points out that the national road network is composed of some 17,200 kilometers and that, while its conditions have improved over time, “the current level of serviceability is inadequate and the network faces the threat of progressive deterioration.”²¹ It notes further that to meet this challenge, the Peruvian Government has two highway administration methods: “the first is direct action by PVN on approximately 10,600 km of the RVN. The second is through road concessions, which are used for the expansion, rehabilitation, and maintenance of approximately 4,200 km of roads.” The Northern Amazon (i.e., IIRSA Norte), Southern Amazon (Interoceanica/IIRSA Sur), Coastal-Mountain, and Arequipa-Matarani corridors are among the roads that are being improved and operated under concessions.²² According to this document, the CCLIP program would “cover the entire PVN-administered road system, including paved and unpaved roads” as long as they meet certain pre-established criteria, including “the required socio-environmental conditions.”²³ Thus, it presumably does not cover the PVN roads administered through private concessions, including those in the Amazon.

The National Highway System Serviceability Improvement Project, as appraised, has seven components: (i) rehabilitation of paved roads; (ii) improvement of unpaved roads; (iii) rehabilitation of asphalt roads; (iv) road maintenance; (v) institutional strengthening; (vi) sector planning studies; and (vii) administration and management. The first three components reportedly also contain financing for pre-investment and environmental studies. In addition, the description of the fourth component states that “road conservation practices will be incorporated

²¹ Ibid., para. 1.3, pg. 1. It goes on to observe that “this situation makes it difficult to access basic services (health, education, justice, etc.), mainly in poorer and more remote regions, thus increasing social differences between population groups that require greater integration to improve their standards of living. In the case of goods transportation, the higher net cost of transporting inputs and finished goods to and from markets, the more complicated logistics, and the greater risk of perishable goods loss have an appreciable effect on competitiveness due to higher end costs.”

²² Ibid., para. 1.4, pp. 1-2.

²³ Ibid., para. 2.6 pg. 13. The other conditions were that they must:(i) have been prioritized by the Highway Management System/Highway Infrastructure Management System (SGC/SGIV) and (ii) have an internal rate of return of greater than or equal to 12%, based on direct user benefits, and a statement of feasibility issued by the National System of Public Investment (SNIP).

to ensure that the full useful life of the design will be reached, and effective socio-environmental and public involvement practices applied.”²⁴

The loan proposal document contains a section covering environmental and social impacts, which indicates that, under Peru’s National Environmental Management System created by Law 28245 of June 2004, “sector authorities are responsible for exercising the sector’s specific environmental functions.” Thus, the Dirección General de Asuntos Socioambientales (DGASA) of the MTC is “the environmental authority responsible for effective environmental and social management of transportation infrastructure projects, as well as leading any required expropriation and resettlement processes.”²⁵ During project preparation, a strategic environmental assessment of the CCLIP was carried out, which encompassed the following:

- a socio-environmental classification of Peru based on its ecoregions and main physical, biological, socioeconomic, and cultural characteristics;
- general analysis of potential socio-environmental impacts and vulnerability of the national road system to natural disasters;²⁶
- definition of the methodologies and guidelines for evaluating the environmental and socio-cultural impacts of the different types of road projects that could be financed by the CCLIP (construction, improvements, rehabilitation, maintenance); and
- identification of institutional responsibilities and procedures for environmental and social management of road projects over their lifecycle.²⁷

A socio-environmental analysis was also undertaken for “a representative sample” of subprojects, which, according to the project document, “shows the planned works have broad and varied positive socio-environmental impacts...and do not have significant negative impacts because the proposed projects are small to medium-scale, fairly traditional from an engineering standpoint, and the impacts can be prevented and mitigated through measures in the

²⁴ Ibid., para 2.18, pg. 15. Further description of these components is provided in paras. 2.12-2.29, pp. 14-18 of this report.

²⁵ Ibid., para. 4.18, pg. 26.

²⁶ More specifically, this “impact analysis” reportedly considered: protection of biodiversity and protected areas; deforestation; soil erosion; alteration of water courses; poverty reduction; land tenancy and soil use; culture and identity of indigenous peoples; and protection of archaeological sites. The analysis of the vulnerability of the national road system to natural disasters, in turn, considered the areas at greatest risk of floods, seismic activity, land slippage and landslides; volcanic activity; drought; and freezing. Ibid., footnote 1 on pg. 27.

²⁷ Ibid., para. 4.19, pg. 27. The project report also contained an Annex (No. V), which summarized the SEA-CCLIP: See Marco A. Zambrano Ch., *Línea de Crédito Concesional para Proyectos de Infraestructura – CCLIP, Provias Nacional Peru: Evaluación Ambiental Estratégica*, Lima, Peru, May 2006. See also Marco A. Zambrano Ch., *Informe de Gestión Ambiental y Social de la Línea CCLIP*, Lima, Peru, May 2006, which is part of the same Annex.

Environmental and Social Management Plans (ESMPs), the costs of which will be included in the project costs.”²⁸ In addition, an Environmental and Social Management Framework (FESM) was elaborated, which reportedly established: (i) socio-environmental criteria for subprojects eligible for financing under the project; (ii) the methodology for classifying road subprojects based on their potential socio-environmental risk;²⁹ (iii) the types of socio-environmental evaluation (or semi-detailed EIA in accordance with Peruvian legislation), technical specifications, population resettlement, socio-cultural analysis and development of indigenous populations, and public consultation; (iv) internal procedures and responsibilities of PVN and DGASA for project socio-environmental management; and (v) the training program for PVN technical specialists, to be implemented with project funds.³⁰ Finally, the project is expected to finance independent socio-environmental audits, “the results of which will be distributed among all interested parties.”³¹ However, no further information is provided on the purpose or nature of these audits.

A review of the environment-related annexes of the loan proposal document reveals that their focus is primarily, if not exclusively, on potential direct environmental and social impacts of the various types of road improvement – mainly rehabilitation and maintenance – expected to be carried out under the project. While this is fine as far as it goes, as in the case of PE-L-0197 briefly described above, these assessments are largely limited to possible impacts in the immediate rights-of-way of the roads in question and immediately adjacent areas, including those used as borrow pits, dump sites and contract workers camps. Possible indirect, including potential induced development, impacts are not considered, nor are the larger areas of influence of these transport corridors, many of which are likely to contain indigenous communities, that might be affected – both positively and negatively -- by improvements in access, particularly in

²⁸ Ibid., para. 4.20, pg. 27. The loan proposal document also contained a specific Annex (No. IV) that included the results of the socio-environmental analysis of the project sample, together with an identification of the main impacts by type of works and the corresponding preventive and mitigation measures to be developed in the respective ESMPs. See Marco A. Zambrano Ch., *Informe de Gestión Ambiental y Social del Primer Programa de la Red Vial Nacional*, Lima, Peru, May 2006.

²⁹ More specifically, this methodology reportedly takes into account the minimum level of physical work in each type of project and the socio-environmental vulnerability of its area of influence.

³⁰ Ibid., para. 4.21, pp. 27-28. The project report affirms that the FESM takes “due consideration” of the Bank’s Environment Policy (OP-710), Resettlement Policy (OP-710), and Indigenous Peoples Policy (OP-765). It also notes that the project’s institutional strengthening component included various activities “to ensure effective implementation of the FESM,” including implementation of a geographic information system (GIS) with digitized environmental and social maps to support the project’s risk classification system and training of PVN technical specialists in the FESM, among other measures (see para. 4.22).

³¹ Ibid., para. 4.23, pg. 28.

the case of previously unpaved roads. As a consequence, there are no studies of existing settlements, economic activities, and land tenure and use in the areas through which the roads to be upgraded are located nor of the possible impact of the proposed road improvements on these variables and any associated environmental and social pressures that could result from them.

In summary, while the inattention to potential indirect environmental and social impacts of road improvements may be appropriate in cases of routine maintenance or simple rehabilitation of already paved roads in previously settled areas, which are not likely to have significant direct or indirect effects, such impacts could be considerably more significant where rehabilitation and/or other improvements to unpaved roads is concerned, especially if this involves pavement and/or if they are located in more remote areas and ones of greater ecological and socio-cultural diversity and sensitivity. This, therefore, is a possible shortcoming of the proposed approach, which should be examined on a case-by-case basis. This is particularly the case along parts of the Interoceanica/IIRSA Sur Highway -- including the non-Amazonian section in the highlands between Cuzco and Puno -- which is likely to witness a substantial increase in traffic that could affect land values and land use, and, thus, the environment and local communities, along its entire length now that the connection to Brazil has been completed and the road is fully operational. In any case, there will be a need to carefully monitor what happens along the entire corridor and its larger area of influence over the coming years now that this vital cross-continental road link has been fully established.

V. The Border Crossing Improvements Projects (PE-T-1008 and PE-L-1003)

While not involving road investments *per se*, the Bank has also approved both Technical Cooperation (TC) and lending operations that involve improvements at the IIRSA Sur border between Peru and Brazil. The first of these, the IIRSA Peru Border Crossings Project (PE-T-1008), entailing a non-reimbursable TC grant of US\$ 610,000, was approved in January 2005, signed in September 2005 and completed in August 2010. According to the Bank's external website, this project was intended to finance: (i) technical and baseline studies for the Border Crossing control centers in Iñapari, on the border with Brazil (along the Interoceanica/IIRSA Sur), and Tacna-Arica on the border with Chile; (ii) technical studies for utilities at the minimum level required to ensure operations; (iii) mapping of logistic chains of Desaguadero, on the

border between Peru and Bolivia; (iv) analysis of a potential free traffic area in Iñapari; (v) support for future project execution arrangements; (vi) social development and community management, supporting negotiation with local stakeholders; (vii) execution of local development plans in Tacna-Arica and Iñapari; (viii) design of a community management and communications strategy in Desaguadero; and (ix) identification of potential logistic and complementary services in Desaguadero. This grant was almost completely disbursed by the time it closed, and, while there is no completion report in the files, presumably the activities foreseen under the project were carried out largely as intended. These activities, moreover, appear to have been part of the preparation for the subsequent Bank loan described below.

The Border Crossings Project (PE-L-1003), partially financed with a Bank loan of US\$ 5 million, was approved in December 2006 and signed in February 2008, although it is not clear why it took more than a year for the loan signature to occur. The project is still under implementation, with roughly US\$ 2.9 million of the Bank loan disbursed as of late 2011. According to the loan proposal, its general objective consists in “facilitating bi-national and regional commerce by simplifying administrative procedures at critical regional international trade nodes, i.e., the border crossings. More specifically, the project will build and put into operation the integrated border control center at Deaguadero, on the border with Bolivia, and assist in putting into operation the centers at the borders with Chile (Santa Rosa) and Brazil (Iñapari), together with the adoption of efficient control procedures in all three in order to reduce the waiting times at the borders.”³² The principal component of the project in terms of total cost (close to US\$ 3.8 million) is called “infrastructure and environmental protection” and consists mainly of construction of the aforementioned border crossing center at Desaguadero and associated facilities, including “sanitary control” laboratories and storage facilities for agro-ranching products, hazardous cargo, and illegal species (“*especies descomisadas*”). There is also a small subcomponent for the “improvement of processes,” which includes “the design and/or adjustment of operational manuals that contain control procedures for, among other aspects, compliance with current environmental protection norms,” and one for “community relations

³² Inter-American Development Bank, *Peru – Proyecto Paso de Frontera Desaguadero (Peru-Bolivia) y Componentes Transversales en el Marco del Programa “Pasos de Frontera Perú – IIRSA (PE-L-1003) Propuesta de Préstamo*, Washington, D.C. Executive Summary, pg. 1. My translation.

management” containing, *inter alia*, resources for “execution of mitigation measures for possible impacts from long-distance international traffic on local economic activity.”³³

According to this report, more specifically, “Iñapari (Peru)-Assis (Brazil)...is the border center on the Interoceanic Corridor, a project that is part of the coast-highlands-jungle (“*costa-sierra-selva*”) axis and which will be the first formal highway link with Brazil. Peru is implementing this project through a private sector concession....with which the traffic flow would increase.”³⁴ This border crossing was facilitated by the inauguration of the bridge crossing the Acre River between Iñapari and Assis Brasil, also an IIRSA project, in January 2006.³⁵ The border center in Brazil had already been built, while the installations on the Peruvian side were described in the loan proposal document as “very precarious.”³⁶ Given that the actual construction works to be financed under the project were relatively small and localized, it was not expected to have any significant adverse environmental impacts and, thus, no EIA was required or undertaken. Nonetheless, it is important to register that the Bank has been involved in financing some of the border crossing improvements between Peru and Brazil on the Interoceanica/ IIRSA Sur Highway, together with its road upgrading investments on the highlands section of this road.

VI. The Conservancy and Sustainable Development Project (PE-M-1056/PE-T-1137)

The Bank has likewise been involved in environmental management and “sustainable development” activities along the entire extension of the Amazonian portion of the Interoceanica/IIRSA Sur Highway Corridor (whose physical construction and paving was partly financed by a US\$ 150 million loan from the Andean Development Corporation³⁷) through a

³³ Ibid., paras. 2.7, 2.9, and 2.11, pp. 12-13. My translation.

³⁴ Ibid., para. 1.24, pg. 7. At nearly 400,000 tons per year, 90% of the trade between Peru and Bolivia, in turn, crosses at Desaguadero, representing the third most important border crossing in terms of freight volume transported in the Andean region.

³⁵ Prior to this, traffic was limited to an average of just 22 vehicles per day using a system of barges to cross the river.

³⁶ Ibid., para. 1.30, pg. 8. The report also affirms that “Given that the connection [i.e., the bridge] already exists and in virtue of the works for the InteroceanicaCorridor, it is a priority for the Government of Peru to have an adequate border control center operating in 2009” (pp. 8-9).

³⁷ See CAF’s external website, which contains the following press release: *CAF Ortogó US\$ 150 Millones al Perú para Los Tramos 2 y 3 del Corredor Vial Interoceánico Sur*, October 2, 2006. An earlier press release had mentioned a possible US\$ 200 million CAF credit line for this project, see CAF, *CAF Ortogó US\$ 260 Millones al Perú para el Corridor Multimodal Amazonas Norte y La Interoceanica Sur*, February 23, 2006. No information is provided, however, with respect to the environmental and social safeguards applied to this project.

Technical Cooperation project entitled “Integrating Conservancy and Sustainable Development in the Southern Interoceanica Highway Corridor.” This project (PE-M-1056/Pe-T-1137), which involves two grants – one from the Multi-lateral Investment Fund (MIF) and the other from the Italian Trust Fund for International Competitiveness (ICR) -- of US\$ 1.5 million each, was approved in July 2008 and signed in February 2009. Both grants were about 47 percent disbursed as of late 2011, according to the Bank’s external website. The executing agency in both cases is the Asociación Odebrecht Peru para el Desarrollo Sostenible y Conservación (hereafter Odebrecht Association),³⁸ which is linked to the large Brazilian construction firm that is a central part of the private consortium that has built and will operate this portion of the road under a 25 year concession from the Peruvian Government.³⁹

The general objective of the project, according to the Donor’s Memorandum, is “to promote sustainable development and biodiversity conservation in the area of influence of the Southern Interoceanica Corridor, in order to improve the quality of life for the surrounding communities by identifying alternatives for job creation and income generation.” Its specific objective is “to develop sustainable production-oriented ventures adapted to the potential of the land and the population, thereby strengthening the capacity of local communities to manage the processes of change and development associated with the highway corridor.” The area of influence of the highway corridor for purposes of this project is defined as the zone between two parallel lines 50 kilometers from the sections of the road between Urcos in the Department of Cuzco and Iñapari in the Department of Madre de Dios, which borders Brazil. While this number is ultimately arbitrary, as this section involves a road length of 703 kilometers, the total “area of influence” covered by this corridor, so defined, is 70,300 square kilometers.⁴⁰ The actual indirect area of influence of the highway – both in its Amazonian and non-Amazonian sections will

³⁸ According to the Donors Memorandum, Inter-American Development Bank, *Peru – Integrating Conservancy and Sustainable Development in the Southern Interoceanic Highway Corridor (PE-M-1056/PE-T-1137) Donors Memorandum*, Washington D.C., Odebrecht Association “is a private nonprofit association created by Organización Odebrecht through Odebrecht Perú Ingeniería y Construcción S.A.C. and Odebrecht Perú Inversiones en Infraestructura S.A. to promote social development through sustainable initiatives to raise the quality of life and protect the environment”(para 4.1, pg. 8).

³⁹ More precisely, this consortium, known as CONIRSA (for Concesionaria Interoceanica Sur) is a joint venture between Construtora Norberto Odebrecht S.A., Graña y Montero S.A.A., JJC Contratistas Generales S.A., and Ingenieros Civiles y Contratistas Generales S.A.

⁴⁰ IDB, *Donors Memorandum*, op. cit., Executive Summary, pp. 1-2.

depend especially on existing and new side – especially penetration – roads and is also likely to expand over time.⁴¹

According to the project document, the area “has one of the world’s greatest concentrations of biodiversity, due to the good state of conservation and diversity of ecosystems due to the altitudinal gradient,” and traverses the Vilcabamba-Amboró Biodiversity Conservation Corridor in the tropical Andes, which is characterized as “one of the world’s biodiversity hotspots.”⁴² The corridor is home to a large number of small farmer (*campesino*) communities, with the section of the highway between Inambari and Iñapari in the east housing 30 indigenous communities, more than half of which (18) were reportedly situated in the “project target area.”⁴³ This is also an area of extensive poverty, as 90 percent of the roughly 120,000 people living in the corridor had an estimated average family per capita income of just US\$ 90, according to this source, which also observed that the local population was primarily engaged in “informal subsistence activities reliant on natural resources,” mainly subsistence agriculture, logging, nut production, fishing, and gold mining. At the time the project was appraised, the area was already witnessing substantial immigration, due in part to the “attraction of informal activities,” with the department of Madre de Dios experiencing the highest rate of population growth -- 3.1% per annum, which is nearly twice the national average⁴⁴ -- in all of Peru. Vehicle traffic had also increased significantly, already exceeding the projections for 2009 -- and in some areas for 2015, by 2008⁴⁵ -- well before the Amazonian road improvements, and, thus, the connection to Brazil, had been completed.

The Donors Memorandum clearly recognizes the significant direct and indirect impacts the Interoceanica Highway is likely to have both on the environment and on the resident and

⁴¹ An interesting illustration as to how this happened in the case of Rondônia with pavement of the BR-364 highway between Cuiabá, Mato Grosso and Porto Velho can be already picked up in satellite imagery in the late 1980s, see Gordon Wells, *Observing Earth's Environment from Space*, in Laurie Friday and Ronald Laskey (editors), *The Fragile Environment: The Darwin College Lectures*, Cambridge University Press, Cambridge, England, 1989, pp. 155-159. For an account of this process more generally, see Adrian Cowell, *The Decade of Destruction: The Crusade to Save the Amazon Rain Forest*, Henry Holt & Company, New York, 1990.

⁴² *Ibid.*, para. 1.2, pg. 1. This Conservation corridor, more specifically, is a 30 million hectare area extending from the Vilcabamba mountain range in Peru to Amboró National Park in central Bolivia.

⁴³ *Ibid.*, para. 1.4, pg. 2.

⁴⁴ 1.6 percent a year between 1990 and 2008.

⁴⁵ *IDB, Donors Memorandum*, op. cit., para. 1.3, pg. 1. More specifically, the report states that “according to 2008 data, the increased vehicle traffic has already reached targets projected for 2009, and at two points along the highway (Urcos and Tinke) the flow exceeds the projections for 2015.”

immigrant populations in its area of influence. In describing the “challenges and opportunities” associated with this major road improvement, it affirms:

The main problem lies in the impact that an infrastructure project of the magnitude of the Peru-Brazil Southern Interoceanic Highway Corridor may have on an environmentally important area recognized for its biodiversity and on a population with low education levels living at minimum subsistence levels. The Corridor may also entail adverse indirect economic and social impacts from the roadway integration and presence of new actors (mining and extraction companies, merchants, and others).

Although the zone is protected under an environmental management system (protected areas, forest use licensing), land-use management is far from entrenched, and many current practices are environmentally unfriendly. The unprofitability of production-oriented activities and practices in communities surrounding the area leads them to engage in informal activities such as illegal logging and informal mining that seriously harm ecosystems.

However, the construction of this large-scale infrastructure is also a significant opportunity for the region’s development, and can have a positive impact on the quality of life for local populations. The first aspect to be noted, then, is the economic potential of this infrastructure if appropriate processes are implemented to integrate local populations into the opportunities for sustainable development that may be generated....⁴⁶

A second aspect concerns land management in a context of weak capacity of local institutions combined with rapid changes in land use caused by the highway integration. For example, rates of deforestation are increasing considerably as a result of migratory flows into the region. The regions of Madre de Dios, Puno, and Cuzco are insufficiently prepared politically, institutionally, and socially to mitigate the potential indirect adverse impacts of the improved highway corridor. At the same time, local institutions have limited capacity to promote the positive socioeconomic impacts that the highway could

⁴⁶ It goes on to state: “for example, sustainable tourism services were rare in the years prior to 2007, but this year [i.e, 2008] they account for over 100,000 visitors, a growth rate that exceeds Peru’s average increase in tourism from 2002 to 2006 (14%).”

*yield, and might unintentionally promote an informal extractive economy generating meager profits and high environmental impact.*⁴⁷

The present project attempts to deal in part with these likely direct and indirect impacts of the road construction in its area of influence. The Donors Memorandum also notes (in a footnote) that land-use management issues along this corridor were being addressed by an “Indirect Impact Mitigation Program,” financed by the Andean Development Corporation (CAF) with co-financing by the Peruvian Government and executed by the National Institute of Natural Resources (INRENA), which the present operation was designed to complement by strengthening local organizations (see below). More specifically, the IDB project is intended to “support local entities in managing the development processes and socio-economic changes that the new highway corridor is certain to produce, and deliver the knowledge and technical assistance necessary to ensure that this development is environmentally and socially sustainable.”⁴⁸ In doing so, it would seek to “promote local job-creation and income-generation initiatives in close coordination with governments, private-sector entities and civil society organizations to promote conservation and consolidation of the corridor through sustainable development initiatives” based on the principles of local government autonomy, rational land use, profitability of productive activities, preservation of local culture, and conservation of biodiversity and the environment.⁴⁹

According to the Donors Memorandum, the Odebrecht Association, together with Conservation International (CI), the Peruvian Association for the Conservation of Nature (ProNaturaleza), and the Americas Fund (FONDAM), characterized as “NGOs whose missions include biodiversity conservation,” had presented the project to MIF “as a way of strengthening local governance to better manage the impact of the increased migratory flows resulting from the new highway corridor.”⁵⁰ MIF’s involvement was considered to be “essential to facilitate

⁴⁷ Ibid., paras. 1.5-1.8, pp. 2-3. Emphasis in the original. The document also observes, however, that “there is a wealth of community and civil society organizations involved in environmental matters and social development, particularly in the high Andes region, including producers associations and NGOs.” (para. 1.9, pg. 3, Emphasis in the original).

⁴⁸ Ibid., para 1.11, pg. 3. It added that, “to this end, the project will strengthen the capacities of public entities and community organizations to manage these processes, and promote competitive ventures based on sustainable resource use and leveraging the local communities’ competitive advantages.”

⁴⁹ Ibid., para. 1.10, pg. 3.

⁵⁰ More specifically, Conservation International began working in Peru in 1987 with the mission “to strengthen the protected natural areas and increase community participation in conservation in order to preserve biodiversity and promote recognition of Peru’s tremendous biological and cultural diversity as its most important asset, making that a

integration of the different participating entities' perspectives and ensure that the development process is adapted to the local population and institutions and implemented with the trust of local leaders." It was also affirmed both that the project would be "innovative within the local competitiveness cluster because it will promote sustainable regional development in connection with a major infrastructure investment, taking on the challenge of transformation that this investment is sure to entail" and that "the lessons learned from this experience will be useful for the MIF and, particularly, for other areas of Latin America facing similar transformations and challenges."⁵¹ Given the striking similarity between this situation and that faced by the Bank in its earlier road improvement-related projects in the neighboring state of Acre, just across the border with Brazil, however, it is curious that no mention is made of this experience and the lessons that had already been learned from it in the Bank's project document.⁵²

The project has the following four components (and expected total costs): (i) strengthening of local governance (US\$ 1.98 million); (ii) development of sustainable production-oriented activities (US\$ 1.355 million); (iii) sustainable biodiversity conservation management (US\$ 1.231 million); and (iv) monitoring, lessons learned, and dissemination (US\$250,000). All components received equal financing shares from MIF and ICR, which together accounted for 44.6% of the project's estimated total cost, with the executing agency, Odebrecht Association, providing the remaining 55.4%, or US\$ 3.6 million. The project coordination unit (PCU) is based at Odebrecht Peru in Lima and there are local project offices in the region itself at Puerto Maldonado and Ocongate (see below).⁵³ The proposed execution and

guiding principal of its development policy." ProNaturaleza was founded in 1984 "to preserve Peru's natural heritage, particularly its biodiversity, by promoting sustainable development and the quality of life of Peruvians;" it evolved out of an initiative of three professors at the Universidad Nacional Agraria La Molina, one of whom was Marc Dourojeanni, also formerly an environmental specialist at both the World Bank and IDB, and is also actively involved in environmental policy design. FONDAM was "established under the agreement to reduce debt and the framework agreement establishing the Americas Fund, signed by the Peruvian Government and the United States in 1997" with the purpose of promoting "activities to preserve, protect, and administer Peru's natural and biological resources." (Ibid., footnotes 11-13, pg. 9)

⁵¹ Ibid., para. 1.10, pp. 3-4.

⁵² In addition to Redwood, *Managing Environmental and Social Impacts...*, *op. cit.*, see the earlier Bank publication, which draws important lessons from this experience by Mary Allegritti, Carlos Ramirez, and Anne Deruyttere (editors), *Public Participation and Sustainable Development in the Amazon: The Case of PMACI*, Inter-American Development Bank, Washington D.C., December 1998.

⁵³ For additional details on implementation arrangements for this project, see paras. 4.1-4.7 of the Donors Memorandum, *op. cit.*, pp. 8-10.

disbursement period is 48 months.⁵⁴ The specific objectives and activities of each component are described in further detail in Annex 2.

Project beneficiaries are identified as the two regional governments and nine municipalities that would receive technical support in strengthening the management of local development processes, the more than 2,400 families expected to participate in project-supported productive activities, and a number of local organizations (15), communities (30), and “lead businesses” (16) that will “co-finance production-oriented ventures and receive operational support and technical assistance.”⁵⁵ Two major risks are also identified in the Donors Memorandum: (i) the project may become associated with the concession holder, CONRISA, and be affected by its reputational risk or by disputes of various kinds; and (ii) the capacity to manage and administer a highly complex project.⁵⁶ Finally, this document contains a section entitled “Environmental and Social Considerations” in which the following is stated:

Although the project does not focus on direct resolution of regional social or environmental problems, its contribution to generating productive, environmentally and socially sustainable opportunities to increase income in the local communities will demonstrate the viability of alternatives to harmful activities (informal mining and illegal logging). In addition, the project’s support for local governance based on community participation is a necessary complement to the oversight of extractive activities, which will improve significantly with the siting of inspection stations at concession toll points and other facilities provided by the highway, a matter being coordinated with authorities. Lastly, the production-oriented activities promoted by the project will fully abide by IDB/MIF environmental and social safeguard requirements, and in general will have a positive or neutral impact. Necessary mitigation measures have been provided [in the respective project Operating Regulations], and the baseline for these projects will incorporate environmental impact and other indicators. The project is classified as Category C.⁵⁷

⁵⁴ Ibid, Executive Summary, pg. 2.

⁵⁵ Ibid., para. 6.1, pg. 11.

⁵⁶ Ibid., para. 6.2, pg. 12. According to this document, the first risk would be mitigated “by the type of project execution, in which Odebrecht Peru is associated with other organizations with longstanding experience,” and the second by “the relationship with FONDAM in particular, the careful selection of the subexecuting agencies, and the professionalism of Odebrecht Peru’s staff.”

⁵⁷ Ibid., para. 7.1, pg. 12.

Additionally, the Donors Memorandum observed that “because the project is located in the high-profile Vilcabamba-Amboró Biodiversity Conservation Corridor, the [Bank’s] project team should include an ESR [Environmental and Social Review]⁵⁸ staff member, to ensure that the activities of the production-oriented initiatives abide by the rules for preservation of their natural, cultural and social environment.” The participation of both CI and ProNaturaleza, which “promote integrated management of protected areas and conservation corridors,” was seen as “an additional guarantee of the project’s focus on the environment.”⁵⁹

This project is described in some detail above and in Annex 2 because it represents an interesting and positive example of a Bank-supported initiative to help local communities take advantage of some of the emerging economic opportunities and to address some of the possible indirect environmental consequences associated with a major road improvement in the Peruvian highlands and Amazon regions. However, as the Bank’s appraisal document clearly recognizes, this is only part of what is needed to effectively minimize, mitigate and/or compensate for the potential adverse environmental and socio-cultural impacts of this major private investment to complete and operate over a considerable period of time the Interoceanica Highway in its larger area of influence. In conclusion, given the Bank’s involvement, therefore, these potential impacts and other attempts to address them, merit further consideration.

VII. Potential Adverse Environmental and Social Impacts of the Interoceanica Highway: Two Critical Views and a Rejoinder

The Peruvian portion of this major international road construction/paving project has been subject to significant criticism from several authors due to its potential environmental and social impacts and the way they are perceived as being managed. Even the road’s economic feasibility has been questioned. Most noteworthy in this regard is a recent article by Bruce Babbitt, former Governor of Arizona, United States Secretary of the Interior, and President of the World Wildlife Fund (WWF). In his article, Babbitt affirms that “the Interoceanica, a highway stretching a thousand kilometers across the Amazon Basin, up the 15,000-foot-high face of the Andes and down to the Pacific in Peru is as worrying as it is ambitious. With additional branches

⁵⁸ According to the Environmental and Social review section of the Executive Summary in the Donors Memorandum, “the Environmental and Social Review Secretariat (ESR) reviewed this operation in 13 June 2008, and its comments have been incorporated in paragraphs 7.1 2t. seq.” (Ibid., pg. 2 of 2)

⁵⁹ Ibid, para. 7.2, pg. 12.

already planned, it has emerged as a serious threat to the human and natural ecology of the greatest expanse of rainforest on the planet.”⁶⁰

The origins of this project, according to Babbitt, date back to September 2000 when a meeting of South American presidents convened by then Brazilian President Fernando Henrique Cardoso launched IIRSA,⁶¹ of which the Interoceanica highway would become the “centerpiece.” He goes on to affirm that “should the full plan be realized the greatest remaining expanse of tropical forest on the planet will be transformed into the industrial heartland of South America. Highway corridors converging inward from the Atlantic coast and from the Andean countries will meet and cross in the Amazon, drawing and concentrating settlement and development in the green heart of the continent.”⁶²

Babbitt then recounts his observations during a field visit to the highway corridor in the Peruvian Amazon, starting in Puerto Maldonado and heading west, where he states that, despite this town’s claims to be the gateway to an “ecotourism paradise” and the “biodiversity capital of the world...signs of another, darker vision are everywhere evident as the surrounding forests come under siege from uncontrolled forest clearing and burning, illegal logging and land speculation.”⁶³ Frontier violence was also in evidence,⁶⁴ as was uncontrolled gold mining.⁶⁵ He

⁶⁰ Bruce Babbitt, *Manifest Destiny: The Planned Trans-South American Highway Will Wreak Massive Damage on the Fragile Ecosystems of the Amazon and Andes. Worse Yet It Doesn’t Even Make Economic Sense. So Why Is It Being Built?*, Americas Quarterly, summer 2009, pg. 28.

⁶¹ Former President Cardoso makes no mention of this in the English version of his memoirs covering his period as president – see Fernando Henrique Cardoso (with Brian Winter and Preface by President Bill Clinton), *The Accidental President of Brazil: A Memoir*, Public Affairs, New York, 2006. However, he does refer briefly to this meeting and the creation of IIRSA, as well as the IDB’s support for it and his good personal relationship with former Bank President Enrique Iglesias, in the much longer and more detailed Portuguese version -- see Fernando Henrique Cardoso, *A Arte da Política: A História que Vivi*, Civilizacao Brasileira, Rio de Janeiro, 2006, pg. 620. Cardoso’s Finance Minister during the entire eight years that he was in office, Pedro Malan, was also previously Brazil’s Executive Director at both the IDB and World Bank.

⁶² According to Babbitt, *op. cit.*, more specifically, “at the time the topic of the day was regional economic integration. In the minds of many of its leaders South America was falling behind in the global economy as regional trade blocs, such as NAFTA and the expanding European Union (EU) seemed to seize the economic initiative. The U.S. proposal for Free Trade Area of the Americas was perceived by Brazil as a threat to its claims of leadership. The presidents’ response to these fears was a grandiose plan, the centerpiece was the Interoceanica highway, reviving an earlier plan for a transborder corridor that would facilitate Brazilian trade with China. The called Transoceanica, but quickly dubbed the “Road to China,” the idea languished for more than a decade until it was reconceived as part of the sprawling IIRSA project, which pulled together national wish lists of no less than 350 infrastructure projects, including highways, bridges, railways, ports, airports, and transmission corridors.” (pg. 28) Elsewhere in the article, he affirms “by eliminating the need to ship goods through the Panama Canal, the highway would speed the process of transforming Brazilian soybeans into Asian tofu.”

⁶³ *Ibid.*, pg. 29. He goes on to state “a passing logging truck made clear that commerce was already flourishing on this road. The pavement soon gave way to a narrow red-dirt track baked by the intense tropical heat. African zebu cattle grazed among blackened stumps in pastures where the forest has been cleared and burned in ever-widening spaces back from the roadway.

notes further that, unlike other parts of the Basin, the far western part of the region, “where long stretches of rapids and waterfalls pouring off the mountains have blocked access,” had been “cradled and protected by the ramparts of the Andes,” maintaining its “pristine quality” and representing the “last possibility for preserving a significant portion of the wild pre-settlement Amazon.”⁶⁶ However, according to Babbitt, completion of the Interoceanica Highway and other parallel IIRSA corridors farther to the north would put this natural patrimony at risk.

Babbitt also questions the economic rationale for the project, affirming that “trucking bulk commodities over land, never mind up and down the Andes is expensive. Shipping by sea costs approximately one-tenth of land transport. Cutting out a few thousand kilometers of ocean distance would be nothing against the cost of trucking over the Andes.”⁶⁷ An additional argument for the road’s economic viability, according to Babbitt, is the need “to access the oil and gas fields now being developed in the headwater regions of the western Amazon.” He acknowledges that an oil and gas boom is presently occurring along the “eastern face of the Andes, reaching from Bolivia into Peru and northward into Ecuador and Colombia, with profound consequences for the future of the Amazon.”

In this context, he specifically mentions the “huge gas strike at Camisea, close to Cuzco,” which the IDB is also supporting. However, he stipulates that Camisea is “not an argument for road building,” affirming that “in fact, it makes exactly the opposite case – that roads are not necessary for modern oil and gas development.”⁶⁸ On the other hand, he observes, “if neither

⁶⁴ Babbitt cites the February 2008 assassination of a local official who “spotted a truckload of illegally harvested mahogany logs” and the subsequent burning of the town hall in Puerto Maldonado as part of a protest against a Presidential decree authorizing the sale of communal lands.

⁶⁵ According to Babbitt, “as we pass through Masuko, a wildcat mining camp set in a moonscape of rock and gravel tailings, we encounter some older Amazon realities. Gold buyers occupy most of the store fronts. Masuko may be remote, but gold travels well from all localities in all seasons. Looking across the wasteland, [the person who accompanied him] shrugs and states the obvious: ‘the government does not have the capacity to control this gold mining.’”

⁶⁶ He goes on to observe that “the center of this extraordinary ecological patrimony is nearby Manu National Park, world-renowned for its profusion of Amazon wildlife – a region where visitors encounter nearly one thousand species of birds (10 percent of the world’s species), troops of monkeys clambering through the tree canopies, huge mixed flocks of green parrots and red and green macaws swarming to the nearby salt licks, tapirs crashing through the forest toward mud wallows, giant otters surfacing in the oxbow lakes, and, if one is lucky, a jaguar or anaconda.” (pg. 30)

⁶⁷ In making this statement, Babbitt also cites Blairo Maggi, then the Governor of the Brazilian state of Mato Grosso and the largest soy producer in Brazil, who “observed that a road over the Andes would be ‘too expensive,’ declaring that he would continue to ship through Atlantic ports.” (pg. 31)

⁶⁸ More specifically, he continues, “in response to the international outcry over the Camisea project’s potential impact on the rain forest, the company pioneered the use of helicopters to construct pipelines as an alternative to building roads and opening up the forest to destruction.”

soybeans nor oil and gas are likely to repay the huge investment in the Interoceanica, there is one export commodity that assuredly will. The export of timber products, mahogany, cedar, and other high value tropical hardwoods, will benefit from opening new roads....The road to China, it turns out, will be a fine all-weather logging road opening access to still more of the remaining Amazon forest.” As the consortium that has built and will operate the road likes to point out, however, the Interoceanica also has significant ecological and cultural touristic potential, especially for Brazilians wishing to visit, over land, the Amazon, Andes, Machu Picchu, near Cuzco, and other Inca heritage sites, which will also depend on their protection and preservation.⁶⁹

Babbitt concludes by stating that “maintenance costs and profitability aside,⁷⁰ Interoceanica is an impressive example of Brazilian engineering, creative financing⁷¹ and international cooperation. Whether the road is an optimal investment of public resources, only time will tell, for there was little economic analysis put forward by IIRSA, Odebrecht, or the governments of Brazil and Peru.” The rest of this article deals with other proposed major road corridors in the Amazon, including IIRSA Norte. It nevertheless provides an overview of some of the induced development impacts with potentially serious environmental and/or social consequences associated with and/or exacerbated by the Interoceanica and other emerging road corridors that cross parts of the Amazon Basin and the Andes down to the Pacific coast of South America. A second, equally critical, article adds more to this picture, observing the following:

The Interoceanica, financed in part by the Development Bank of Brazil, the Andean Development Corporation, and the IDB, will link Peru’s southern coast with the

⁶⁹ See, for example, Iniciativa Interoceânica Sul, *Rodovia Interoceânica Sul: Uma Rota de Diversidade Cultural e de Múltiplos Ecosistemas*, on the Initiatives website. This site, incidentally, identifies IDB, through MIF or FOMIN (Fondo Multilateral de Inversiones) in Portuguese, as one of the partners that support it together with Odebrecht Peru, CONIRSA, CI, Fundación Pro Naturaleza, CAF and other entities – in short in reference to the Conservancy and Sustainable Development Project described above. This publication, more specifically, identifies 18 specific “attractions, products, and touristic services” that are being supported under this initiative and, thus, under the MIF/ICR-financed project.

⁷⁰ As it is a long-term concession which obligates Odebrecht to maintain the road for 25 years, the Amazonian portion of the Interoceanica will be “operated as a private toll road, with revenues used to repay construction costs and on-going maintenance,” according to Babbitt, although it is not clear how much the tolls will be.”

⁷¹ According to the article, “all parties concede that there will not be sufficient traffic for tolls to repay the construction outlays.” These costs are, thus, being financed through bonds sold into the international market and guaranteed by the Peruvian Government. Babbitt notes further that the likely reason for this approach is that “by structuring the financing through an intermediary, IIRSA and its private sector partners have been able to circumvent the Peruvian national planning process and the constraints of the country’s national budget.”

Amazonian state of Acre in Brazil and is only one of many proposed projects that form the IIRSA initiative. Because Brazil has already developed an extensive road network in parts of Acre, most new construction is expected to take place in Peru. That construction is already underway and the primary road is expected to be complete by the end of 2010....

Although there has been little publicity about the IIRSA or Interoceanica outside of South America, the Interoceanica poses a number of environmental and social threats to both Peru's and Brazil's Amazon regions. The principal environmental concerns include habitat fragmentation and consequent loss of biodiversity, deforestation, water pollution and adverse impacts on indigenous Amazon communities....

The Interoceanica will also cut through designated forest preserves in Peru and threaten traditional cultures and tribes living in those preserves. Major roadways in the Amazon region have already exposed indigenous communities to commercial exploration, water and air pollution and disease. Although both Brazil and Peru have enacted laws designed to protect indigenous communities from the adverse effects of mining, petroleum exploration, timber harvesting and ranching, in practice highways through such areas have compromised the habitat, health and culture of many indigenous communities.⁷²

In addition, according to this article, neither the Interoceanica, nor other IIRSA-related roads, including IIRSA Norte, “which present their own environmental and social concerns...have undergone any meaningful environmental review. Although construction of the Interoceanica is nominally subject to the environmental reviews required by national laws, the presidential executive orders implementing IIRSA appear to have circumvented the normal legislative and regulatory procedures in both Brazil and Peru.” In this regard further, it goes on to argue that:

Although IIRSA has developed its own Environmental and Social Evaluation Methodology (known as EASE), to evaluate the environmental and social effects of its projects, this methodology does not mandate any of the features typical of environmental review procedures, such as open or formal avenues for public

⁷² Stephen L. Kass, *Assessing South America's 'Interoceanica' Highway*, New York Law Journal, August 28, 2009, pp. 1-2. For one account as to how road building, specifically the paving of BR-364 in Mato Grosso, adversely affected indigenous communities in the Brazilian Amazon in the 1980s, see David Price, *Before the Bulldozer: The Nambiquara Indians and the World Bank*, Seven Locks Press, Cabin John, Maryland, 1989.

participation, an evaluation of project costs and benefits, or an in-depth evaluation of alternatives.⁷³ Instead, consideration and mitigation of the Interoceanica’s environmental and social effects...appears to be left to whatever efforts can be pieced together in the non-profit sector.

One significant contributor to this effort is the Moore Foundation, which recently approved a US\$ 2 million grant to the Amazon Conservation Association for the design and consolidation of a 210,000 hectare conservation corridor to mitigate the Interoceanica’s adverse impacts. This corridor is intended to constitute one of the largest areas of continuous forest in the southwestern Amazon and is an effort to protect the area from deforestation, cattle ranching, mining, and slash-and-burn agriculture. But while such a large-scale effort, if implemented and enforced, may help to mitigate some of the Interoceanica’s impacts in the corridor area, it is not a substitute for long-term publicly accessible impact analysis, mitigation commitments by IIRSA itself and meaningful examination of alternatives.⁷⁴

The article then affirms that it is not clear how and why the Interoceanica “escaped” public environmental review, observing that “the IDB, which provided a portion of IIRSA’s funding, has well-established environmental and impact assessment procedures, including mandatory public review, review of alternatives, and mitigation commitments, for large-scale projects in environmentally sensitive areas.” It also states that the apparent failure in this regard for what it identifies as “IIRSA’s premier project...seems incongruous and particularly unfortunate in view of the broad range of likely environmental and social impacts” associated with the IIRSA roads, as well as “the apparent conflict of these projects with both Brazil’s and Peru’s climate change policies.”⁷⁵ Having been written just prior to the UN Climate Change

⁷³ Here the article, which also specifically cites Bruce Babbitt’s article, refers to the following IIRSA publication: *The Environmental and Social Evaluations with Strategic Approach as Planning Instruments for the IIRSA: Methodology, Components, and Phases*, February 2008.

⁷⁴ Kass, *op. cit.*, pp. 2-3.

⁷⁵ More specifically, it states that “on the Brazilian side, the government has committed, at least on paper, to reduce its rate of deforestation by 50 percent by the year 2017. To achieve even this goal (which is only a fraction of the reductions required), Brazil will have to ensure that neither the Interoceanica nor IIRSA Central or Norte is used for timber exploration or other forms of legal or illegal deforestation. This will necessitate not only coordinating policing by the Brazilian and Peruvian governments, but also a limited number of Interoceanica exits, ancillary development restricted to small, concentrated areas around these exits, and elevated portions of the Interoceanica (or frequent vegetated underpasses) to enable free movement of wildlife.” (pg. 3)

Conference in Copenhagen, Denmark in December 2009, the article concludes with the following statement:

The Interoceanica, and possibly even IIRSA Central and Norte, may well be useful in the long-term economic development of Brazil and its neighbors in South America. These benefits may even be sufficient to outweigh the inevitable environmental and social impacts, which might also be mitigated through carefully implemented design of the project, vigorous long-term enforcement of land-use and other controls and significant investment in health, education and environmental protection measures in affected communities. However, these issues have not been systematically and cumulatively assessed or subjected to meaningful public review. For a program of this hemispheric significance to escape that review, which is now an established part of most domestic laws and international practice, reveals a major gap in regional environmental institutions and, unfortunately, an avoidance in practice of the very commitments that Brazil and other nations are urging as part of a new climate agreement at Copenhagen.⁷⁶

This article is potentially misleading, however, insofar as it may be interpreted to suggest that the IDB is financing construction of the Amazonian portion of the Interoceanic Highway, which, as has been shown above, is not the case. The Bank is, however, financing the upgrading of already paved portions of highlands sections of the road between Cuzco and Puno, and, in doing so, has applied both its own and the Peruvian Government's required environmental assessment and environmental and social safeguard procedures, although, as indicated above, these could have given greater attention to potential indirect, particularly induced development, and cumulative impacts. And through the MIF and ICR-financed Conservancy and Sustainable Development Project, IDB, like the Moore Foundation, is directly supporting measures to help mitigate or compensate for some of the potential indirect environmental impacts associated with construction and paving of the Amazonian portion of this road between Urcos and Iñapari. But as it is not financing these road improvements per se, it does not appear to have been directly involved in the associated environmental review process. The references to Brazil at the end of the article, moreover, are also largely misplaced, because, as the article itself states, the paved road network on the Brazilian side (i.e., BR-364 and BR-317) is already in place and any further

⁷⁶ Ibid., pg. 3.

induced development in Acre as a result of the highway improvements in Peru is likely to be minimal at best.

This notwithstanding, as the Interoceanica and other such roads are already realities, or soon will be, both this article by an environmental lawyer named Stephen Kass and that by Babbitt are correct in suggesting that the principal challenge associated with them is to effectively anticipate and manage the potential indirect environmental and socio-cultural impacts of road construction and paving in the Peruvian Amazon. Among other things, as the earlier experience in northwest Brazil (especially Rondônia) has clearly shown, this requires adequate government capacity and political will at both the national and local levels. In partial response to this challenge, Odebrecht Association's so-called "South Interoceanic Initiative," or "iSur" -- which, as noted in the previous section, is supported by both the IDB and CAF, among other partners -- reportedly "encourages local initiatives for employment and income generation, promotes ecosystem conservation through sustainable productive activities and promotes local participation, therefore contributing to improve the quality of life of local populations."

This initiative is based on the following principles, according to its website: (i) **local government autonomy**: contribute to generate (sic) that the local population decisions are for common benefit and that they generate long-term sustainable development; (ii) **rational use of territory**: promote...actions that respect the skills and vocations of the territories, seeking to reduce the misuse of land in the project's area and therefore induces similar actions in related places; (iii) **profitable productive management**: improve the quality of life of the communities located in the highway surroundings, identifying employment and income alternatives, to the local population; (iv) **respect of local culture**: learn and appreciate the worldviews, values and customs in the area of the initiative, in a disciplined process that will generate the necessary confidence for success; and (v) **conservation of natural resources and biodiversity**: build sustainable development strategies that contribute to the conservation of natural resource and biodiversity, improving the employment opportunities and income from sustainable activities.⁷⁷ Its areas of intervention are: eco-business, responsible tourism, biodiversity conservation, and local governance strengthening and its "methodology" consists in the promotion of two

⁷⁷ Iniciativa Interoceanica Sur, *South Interoceanic Initiative: Integrating Conservation and Development*, pg. 3. (Emphasis in the original). Like the previous reference, this, as well as the version of the same document in Spanish, can be found on the iSur website at www.isur.org.pe.

Development Centers – one for the “High Andes,” based in Ocongate and including the districts of Urcos, Ccatcca, Ocongate, Marcapata and Quincemil in the province of Quispicanchi, department of Cuzco, and the other for the “Lowland Jungle” located in Puerto Maldonado and covering the provinces of Tambopata and Tahuamanu in the department of Madre de Dios – and numerous specific projects implemented from these Centers in the four thematic areas mentioned above.

While these interventions are all good, in and of themselves, however, they are no guarantee that significant induced development in the area of influence of the Interoceanica will not occur and bring significant environmental damage and social costs with it. This is especially true in the Amazon region due to the attraction of new migrants and productive activities to this previously sparsely inhabited part of Peru whose access has been greatly improved and transportation costs greatly reduced as a result of this new transcontinental paved road connection. As both Babbitt and Kass suggest, this will require much stronger and sustained national and local government action to control land use, avoid deforestation and biodiversity loss, enforce environmental regulations, and enhance the protection of both ecological and indigenous reserves. In short, while the above-cited principles of iSur are the correct ones, the interventions proposed through this initiative are insufficient in terms of what is required in order to achieve them as development objectives.

In fairness, and a fact totally ignored by both the Babbitt and Kass articles, some of these required actions are, at least in principal, being supported by another CAF loan, for US\$ 10 million, approved in July 2006 – or several months prior to the time its loans for construction of the Amazonian portions of the Interoceanica were approved (October 2006) – for the social and environmental management of the potential impacts associated with this road. According to CAF’s associated press release, the objective of this project is to “promote the socio-economic and environmentally sustainable development, improving the quality of life (“niveles de vida”) of the population and small farmer (“campesino”) communities, of the zone of influence of the highway corridor.” More specific objectives of the project, according to this source, include the following:

- Develop and implement priority projects and activities that avoid or mitigate the indirect impacts in the zone of influence of the Interoceanica Sur corridor.

- Promote the development and financing of sustainable activities in favor of the populations located in the zone of influence of the project.
- Improve the management of Natural Protected Areas and formalize the creation of new protected areas.
- Establish financial mechanisms oriented to ensuring the consolidation of forest concessions and the financing of productive activities in the area of influence of the project.
- Support the participation and monitoring of the indirect impacts and the financing of projects on the part of civil society.⁷⁸

While based on the information readily available, it is not possible to judge how far this project actually goes in terms of supporting the land use controls and other measures required to avoid significant environmental degradation, deforestation and biodiversity loss, etc., and/or to protect indigenous peoples and communities located in the project's "zone of influence" – or even how this area of influence is defined – as a result of the likely induced development impacts of the Interoceanica. Nor is information easily available regarding how – and how well – this project is being implemented, although it complements – and appears to partially finance – some of the iSur activities briefly described above which the IDB is also financing through its MIF and ICR grants. In addition, it is not clear to what extent it responds to the results of whatever environmental assessment process was actually carried out – as mandated by the Peruvian Government and CAF's own internal environmental and social safeguard requirements – in connection with the much larger road construction and paving investment. Pursuing answers to these questions, while clearly relevant, goes beyond the scope of the present case study, which focuses on the IDB and not CAF.

It is nevertheless evident that both CAF and the IDB, through MIF, are presently directly involved in attempting to mitigate some of the potential indirect environmental and social impacts of the recent major road investments along the most ecologically and socially sensitive Amazonian portions of the Interoceanica corridor. The extent to which the Bank and CAF are coordinating their activities on the ground in this regard is presently unclear. Nor, as suggested above, is it clear whether the CAF social and environmental management project mentioned

⁷⁸ See CAF, *CAF Ortogó US\$ 10 Millones al Perú para Programa de Gestión Social y Ambiental de La Interoceanica Sur*, press release, July 21, 2006. My translation.

above, to which the MIF/ICR project is a complement, is – or will be – sufficient to adequately control and manage the induced development impacts with their associated potentially significant adverse social and environmental consequences over time that completion and operation of this major road corridor are expected to generate. As the Bank is directly involved, together with CAF, in supporting biodiversity conservation and sustainable development in the area of influence of this part of the Interoceanica, however, it would behoove both institutions, now that the improved road is in full operation, to carefully monitor these impacts and advise and assist the Peruvian Government, as well as local municipalities and communities, to address them in an effective way in the years ahead.

VIII. Bank Guarantee for the IIRSA Norte Project (PE-L-1010)

The IDB’s US\$ 60 million Guarantee for IIRSA’s Northern Amazon Hub (PE-L-1010), as the Bank’s external website refers to it, was approved on February 1, 2006, signed on July 19 of the same year, and is reportedly still under “implementation.” None of the funds from this operation have been disbursed as of late 2011, meaning that it had not (yet) been needed to be converted into a loan and, thus, remained a Guarantee. According to the website, the Northern Amazon Hub is “an IIRSA integration corridor between the port of Paita in the Pacific and the river port of Yurimaguas over the Huallaga River, which connects to the Amazon River. The project will be carried out under a concession scheme and the construction payments will be deferred in annual payments once the construction period is finished. To guarantee better financial conditions, the GoP [Government of Peru] will provide a guarantee from the IDB to cover the annual payments for construction.”⁷⁹ This is one of three Guarantees the Bank has provided to Peru, but the only one given to the Government (with the Ministry of Economy and Finance as the “executing agency”) and for a major infrastructure project.⁸⁰

Improvement of the IIRSA Norte road is being financed in part by a US\$ 60 million loan from the Andean Development Corporation (CAF), approved in February 2006, and, like the Amazonian portion of the Interoceanica Sur, implemented by a consortium led by Odebrecht, a large Brazilian construction firm. According to CAF’s press release, “the multimodal Amazonas North corridor will permit the flow of products and merchandise from the port of Paita, located

⁷⁹ IDB external website, *PE-L-1010: Guarantee for IIRSA Northern Amazon Hub*, project description.

⁸⁰ The others were a US\$ 10 million Guarantee for the Grana y Montero (G y M) Partial Credit Risk Guarantee approved in May 2003 and a US\$ 100 million Guarantee for the Banco Continental Guarantee Facility, approved in May 2007.

on the northern Peruvian coast, across the Andes, to navigable rivers in the Amazon Basin (using the port of Yurimaguas on the Huallaga River). This project will benefit more than eight million Peruvians in the north and northeast departments of the country and forms part of a regional initiative that seeks to integrate regional infrastructure in South America.”⁸¹ Given the approval dates and amounts involved, it would appear that the IDB Guarantee is intended to be a direct complement to and support for the parallel CAF loan should the Peruvian Government be unable to make its counterpart contributions in a timely way. According to the Bank’s files, both an environmental impact assessment (issued in December 2004 and available in hard copy in the Bank’s Public Information Center)⁸² and a strategic environmental assessment (SEA, issued in April 2005 – see below)⁸³ were undertaken for the “northern Amazon axis.” The Bank’s project concept document for this Guarantee, which clearly links it to IIRSA, in turn, is dated August 2004.⁸⁴

IX. Design and Conditions of the Bank Guarantee

According to the Bank’s Guarantee Proposal, the objective of this program is “to support the Government of Peru in implementing infrastructure projects using innovative financing arrangements, through support for the Northern Amazon Hub project, by providing a guarantee for the government’s payment commitments to the concessionaire,” noting further that the Government had granted a concession to the private sector to rehabilitate and maintain a 960 kilometer road for a 25 year period and that the Government’s commitment is “to make annual payments to the concessionaire to permit recovery of the investment within a 15-year period, as of the date the works are accepted.”⁸⁵ The Bank’s partial credit Guarantee, in turn, would be for a period of up to 20 years, being convertible into an IDB ordinary capital loan to the Peruvian Government if needed.

Among the “special contractual conditions” explicitly identified in the Project Summary was that, prior to first disbursement should the Guarantee be converted into a loan: “(a) the concessionaire must have completed the works envisaged for each stage and fulfilled during the

⁸¹ See CAF, *CAF Ortogó US\$ 260 Millones al Perú para el Corredor Multimodal Amazonas Norte y la Interoceánica Sur*, op. cit.

⁸² See *Ramal Norte Eje del Amazonas – Evaluación del Impacto Ambiental*, December 4, 2004.

⁸³ See *Ramal Norte Eje del Amazonas – Evaluación Ambiental Estratégica*, April 6, 2005.

⁸⁴ IDB, *Programa de Garantías Ramal Norte Eje del Amazonas (IIRSA) – Esquema del Proyecto*, August 13, 2004.

⁸⁵ IDB, *Peru – Guarantee Program for the IIRSA Northern Amazon Hub (PE-L-1010) – Guarantee Proposal*, Project Summary.

construction stage the social and environmental commitments established in the concession agreement, these commitments having been accepted by the grantor; and (b) it must be demonstrated that the MTC has made progress in implementing the programs accorded priority in the strategic environmental assessment, including the drafting of an agreement with INRENA.”⁸⁶ It is also affirmed that “should the concession be terminated early, the guarantee will cover partial payment of the corresponding annual payment for construction, provided the social and environmental commitments set out in the concession agreement during the construction phase were met, these having been accepted by the grantor.”

It is noteworthy, however, that no mention is made to the “operation” (i.e., post-construction) phase of the project in these conditions, nor is there any indication as to what precisely these “social and environmental commitments” consist in, who would verify whether they have indeed been met, and/or how this would be done. Furthermore, only the “special condition” that the MTC is “advancing in the implementation of the priority programs of the SEA” is actually contained as such in the Guarantee Contract signed between the Bank and the Peruvian Government, with there being no explicit reference to the social and environmental commitments contained in the concession agreement in this regard.⁸⁷ In fairness, the Guarantee Contract does refer to this as an “other condition” for disbursements from the Guarantee,⁸⁸ but there is, nonetheless, an inconsistency between what is stated in the Project Summary in the Guarantee Proposal and what is contained in the Bank legal document for the project in relation to this being a “special condition” of the Guarantee, and, as noted above, no reference in the Contract is made to the post-construction phase of the road.

The Bank’s Guarantee Proposal justifies its support for this project by observing that “the present operation is a strategic project in the Amazon hub, where east-west connections between

⁸⁶ Ibid., Project summary. The other conditions were that: “(c) PROINVERSION [Agency for the Promotion of Private Investment] has presented a legal opinion indicating that the bidding process for the concession has conformed to the procedures and requirements established in Peruvian law; and (d) a trust has been created and continues in effect for program administration, to the Bank’s satisfaction.”

⁸⁷ See IDB, *Contrato de Garantía y Contragarantía No. 1717/OC-PE entre la República del Perú y el Banco Interamericano de Desarrollo – Programa de Garantías Ramal Amazonas Norte IIRSA*, July 19, 2006, Clausula 2.03, Condiciones especiales previas a los desembolsos de la garantía, pg. 8.

⁸⁸ Item (e) of Clause 2.04 of the Guarantee Contract, which stipulates other disbursement conditions, states that “have received the Disbursement Notification...which should be accompanied by an original or certified copy of the Certificate of Advance of Works [“Certificado de Avance de Obras”] (CAO) in relation to the works that have been received and accepted by the [Government] in conformance with the terms of the Concession Contract. The DAO should expressly certify that the Concessionaire has complied with the social and environmental conditions foreseen in the Concession Contract with respect to the works covered in said CAO.” My translation.

the Andean countries (Colombia, Ecuador, Peru) and Brazil can be promoted by completing missing stretches of road and developing inland navigation.” It also affirms that “the Bank is supporting those connections that have the lowest impact. For example, in the Northern Amazon corridor the focus is on upgrading an existing road that leads to where a waterway connection will exist in the future, thereby promoting transportation solutions consistent with the characteristics of the region.” It goes on to state that the project “would support the objective of raising competitiveness through an innovative strategy of private-sector participation.”⁸⁹ And it confirms that “the IDB guarantee complements the facility that the CAF has approved for the concessionaire. The CAF facility provides financing during the construction phase, while the IDB guarantee provides credit enhancement during the post-construction phase.” It also argues that “together, the two open up the possibility of attracting domestic and/or international resources to the program.”⁹⁰

Expected to be implemented in four years and involving estimated total basic investments of nearly US\$ 220.5 million, a more specific description of the project as contained in the IDB Guarantee Proposal is as follows:

The objective of the project...is to foster economic integration between the port of Paita on the Pacific, the city of Piura, and the river port of Yurimaguas on the Huallaga River, which, in turn, connects with the Amazon River. This will promote the establishment of new production centers and boost intra- and inter-regional trade by lowering transportation costs.

*The works consist of improving and rehabilitating existing stretches of road, protecting existing works against natural disasters, and building and rehabilitating bridges, by means of a PPP [Public-Private Partnership] arrangement. Currently, about 90% of the corridor is paved but requires patching and resurfacing of the top course, and paving of the last stretch. This involves preventive works against natural disasters, such as culverts, bank stabilization, protection works, and bridge rehabilitation and construction. The condition of the wearing course and banks between Tarapoto and Yurimaguas makes that stretch the most critical.*⁹¹

⁸⁹IDB, Guarantee Proposal, *op. cit.*, paras. 1.7 and 1.9, pp. 2-3.

⁹⁰ *Ibid.*, para. 1.14, pg. 4.

⁹¹ *Ibid.*, paras. 2.6-2.8, pg. 6. More specifically, according to this document, “the project is divided into six stretches, each with a specific intervention: (1) **Paita–Piura**: reconstruction or reinforcement of all drainage works in the

The Bank's Guarantee Proposal also contains a description of the "project risk distribution," prefaced by the statement that "the concession contract contains innovative financing elements, and the main risks are assumed by the parties, in accordance with their capacity to mitigate them, bearing in mind that this is both a long and a large project that runs through complex areas such as the Peruvian coast, highlands, and jungle, which have difficult climates, high rainfall risk, and geological and seismic problems."⁹² The document then identifies specific construction, operation and maintenance, financing, early termination, commercial, natural disasters and El Niño-related, other environmental, and macroeconomic risks, observing in the case of "environmental" ones, for example, that "the concessionaire is bound under the contract to mitigate the environmental and social risks directly associated with both the project's construction phase and its operation and maintenance phase."⁹³ However, as noted above, no specific reference to social and environmental commitments on the part of the concessionaire -- or the Peruvian Government -- during the operation and maintenance phase of the project is contained in the Bank's Guarantee Contract, so it is unclear exactly to what "contract" this statement refers.

The Guarantee Proposal likewise has a specific section on the project's "environmental impact," according to which:

The project's social and environmental considerations are framed by the country's environmental protection standards, which are congruent with Bank policy. A Strategic Environmental Assessment (SEA) has been conducted for the corridor and its area of influence, and the different stretches have individual environmental impact assessments (EIA). To do this (sic), the following actions

zone, construction of side ditches and embankments, and bank stabilization; **(2) Piura–Olmos:** bridge rehabilitation and improvement, construction of drainage and river protection works, and construction of two bridges; **(3) Olmos–Corral Quemado:** the MTC recently completed the rehabilitation works for this stretch; **(4) Corral Quemado–Rioja:** treatment of critical segments, rehabilitation and reconstruction of pavement, river protection works, and bank stabilization; **(5) Rioja–Tarapoto:** rehabilitation of critical segments, treatment of bank instability, river scouring, erosion; reconstruction of engineering works; and **(6) Tarapoto–Yurimaguas:** improvement and rehabilitation of the wearing course, improvement of the drainage system, reconstruction of trenches, landings, and bridges." (Emphasis in the original) Project implementation schedule and basic investment cost estimates by segment are presented in Table II-1, pg. 7.

⁹² Ibid., para. 2.24, pg. 11.

⁹³ Ibid., para. 2.32, pg. 13. The document also states that "In the case of the right of way that has been affected, its long-term rehabilitation is the responsibility of the Government of Peru." With respect to risks associated with natural disasters and El Niño, in turn, the document affirms that "to address the risks of natural disasters, earthquakes, floods, rain, fire, explosions, and other catastrophes, the concessionaire must take out an insurance policy against all risks for the full replacement value of the goods and works covered by the concession contract."

were taken: (i) review and reformulation of environmental impact assessments, (ii) review and formulation of a Strategic Environmental Assessment, (iii) review of the design to be used as a reference for minimizing adverse impact on the environment, (iv) greater weight given to socio-environmental considerations when ranking bidders in the competition for the concession, (v) inclusion in the concession contract of requirements to prevent and mitigate socio-environmental impact, and (vi) inclusion of conditions precedent to the entry into force of the guarantee regarding compliance with the Bank's environmental and social policies.⁹⁴

The Proposal goes on to state that the project was expected to have a significant positive impact (see below), while “potential adverse environmental and social impacts of the operation range from moderate to low because the program involves works to rehabilitate and improve an existing roadway and recover critical areas affected by El Niño, and does not involve opening up new roads, expanding existing roads, or building bypasses.” Affirming that “the concession contract includes the environmental management plans for the construction and operation phases, as well as fines and penalties for noncompliance during the operation phase,” without, however, indicating more specifically what these consist in, it then goes on to identify potential direct impacts during both the construction⁹⁵ and subsequent operation⁹⁶ phases, as well as indirect ones, reiterating with respect to the latter that:

...moderate to low impacts are expected, given that most of the works to be undertaken consist of building protection works and drainage systems, improving the wearing course, and rehabilitating bridges on an existing road. The following impacts were identified in the SEA: (i) possible increase in the cultivation of illegal crops; (ii) land use

⁹⁴ Ibid., para. 4.14, pg. 26.

⁹⁵ During the construction stage, direct impacts were expected to include: (i) soil erosion and landscape degradation, with possible sedimentation of nearby water bodies; (ii) soil and water pollution caused by waste and effluents produced in the work areas; (iii) risk of landslides and collapses in unstable areas due to earth movements; (iv) landscape degradation and contamination of water bodies due to inadequate waste and debris disposal (v) river and stream bed intervention; (vi) accidental rupture of pipes or public utility lines, and temporary interruption of services in urban areas; (vii) generation of noise, gas, and dust; (viii) traffic congestion and temporary blocked access to dwellings and businesses in populated areas; (ix) dangerous driving conditions while works are under way; and (x) risks to workers of occupational diseases and accidents. The document also observed that, In some stretches, geotechnical instability is high, which can cause traffic delays and interruptions; this will be mitigated during the works stage. Ibid., para. 4.16, pp. 26-27.

⁹⁶ Specifically, (i) risk of hazardous materials spills; (ii) increased road accidents; and (iii) increased noise and emissions pollution. (Ibid., para. 4.17, pg. 27)

*changes from agricultural to commercial and residential; (iii) possible illegal activity in forest areas for farming activities; and (iv) possible impact on local cultural patterns and possible migration of local inhabitants to cities. Indirect impacts have been classified as moderate to low because it was determined that no indigenous reservations or areas vulnerable to deforestation exist within the area of indirect influence with access by land to the feeder roads.*⁹⁷

The Guarantee Proposal, however, does not indicate how the area of influence of the project was determined or what it includes. In addition, it immediately seems to contradict itself with respect to presence of indigenous peoples in the road's area of influence a mere two paragraphs later by stating that "there are no indigenous communities in the project's area of direct influence, although some live in its area of indirect influence, nor are there other potentially vulnerable communities such as Afro-descendant groups." It likewise affirms that indigenous communities were consulted during preparation of the SEA, "which identified impacts on indigenous communities including loss of cultural identity and inadequate land use and land tenure, which will be moderate to low in impact."⁹⁸

The aforementioned positive project impact, in turn, is presented primarily in economic and physical, including road safety, terms:

The principal project benefits are that Peru's competitiveness will be increased, it will integrate remote regions of the country, and it will contribute to road integration with IIRSA countries. These benefits will result from the improved transportation conditions for people, for national freight transport, and for foreign trade. The project seeks to reduce transportation costs and travel time, and to improve road safety.

The improvement of transportation conditions in the Northern Amazon Hub will have a positive impact on the value chain of Peru's agricultural and industrial sectors, and will have a multiplier effect on other competitiveness factors, such as improved access of

⁹⁷ Ibid., para 4.18, pg 28. It goes on to state that In the La Escalera highland protection forest, located in the area of direct influence, no problems exist of illegal extraction of lumber or fauna, or of illegal settlements, and according to the analysis these problems are not expected to arise. Most of the impacts identified are being addressed by the USAID Poverty Reduction and Alleviation Project, which is a comprehensive program being implemented in the area to replace illegal crops and reduce poverty, while also providing infrastructure in the region.

⁹⁸ Ibid., para. 4.20, pg. 29. It also observes that the SEA "identifies a number of development programs that involve the indigenous communities" and that "implementation of the plans will be on the agenda for the dialogue on the environmental assessment to be held by the Bank in Peru in 2005,"but does not further clarify exactly what this means.

nearby production and service centers to human and natural resources. Road safety conditions for users will be improved because the concessionaire is under the obligation to maintain the road at established service levels....

...its impact on economic growth will contribute to the goals of the poverty reduction strategy. The project benefits urban populations and promotes industrial and agricultural development in the project's area of influence. It will also make it possible to bring isolated areas in the area of influence of the Huallagas and Amazon rivers into the rest of the Peruvian economy, promoting sustainable industries such as ecotourism.⁹⁹

However, the Guarantee Proposal does not address the potential adverse environmental and social impacts associated with the project's indirect role in improving access to natural resources and promoting "industrial and agricultural development in its area of influence" or as a result of bringing "isolated areas in the area of influence of the Huallaga and Amazon rivers into the rest of the Peruvian economy," other than to mention "sustainable industries such as ecotourism." Thus, there is a significant mismatch or "disconnect" in the document between the expected indirect economic benefits of the project and its potential indirect environmental and social costs in its larger area of influence, which, as stated above, is never clearly identified but presumably includes the "isolated areas in the area of influence of the Hullaga and Amazon rivers" to which it explicitly refers, along with other areas along the road corridor as a whole.

The Guarantee Proposal does, however, refer to the environmental and social due diligence measures associated with the project, which, according to this document, entail the following:

An environmental and social management plan was agreed to for addressing the impacts [identified by the EIAs and SEA], which includes actions to ensure timely and effective implementation of measures to prevent, mitigate, and compensate for these impacts as a contractual obligation of the concessionaire, who must cover the cost of same. In addition, measures to prevent and mitigate the principal indirect impacts identified were accorded priority. The EIA environmental management plans contain programs for preventing and mitigating impact, as follows: (i) environmental control and/or mitigation, including measures to prevent, control, correct, avoid, or mitigate potential adverse impacts during the construction and operation phases; (ii) environmental monitoring,

⁹⁹ Ibid., paras. 4.27-4.29, pp. 30-31.

which consists of periodic assessments of the critical variables and verification of fulfillment of mitigation measures; (iii) environmental training and education on good environmental practices for employees of the works and the community; and (iv) contingencies for emergency prevention and response. The environmental management program for all stages of the project includes investment and management measures in the concession contract....

To mitigate indirect environmental impacts, a social and environmental management plan was designed with the following priority, higher impact programs: (i) communication and dissemination; (ii) institution-strengthening; (iii) environmental monitoring; and (iv) strengthening the control system for the traffic in lumber, illegal crops, and hazardous materials. The measures the concessionaire must take to mitigate these effects include building police posts and providing public services and communications facilities in the corridor. This will considerably improve the control of traffic in lumber, protected flora and fauna, hazardous materials, and illegal crops. Before the guarantee can become effective, the MTC must sign an agreement with INRENA to ensure adequate control of the toll booths. The overall management of deforestation prevention programs, protected area programs, and land use programs will be addressed through the environmental assessment of Peru, to be performed by the Bank in 2005.¹⁰⁰

It is unclear what “the environmental assessment of Peru, to be performed by the Bank in 2005” refers to in relation to the “overall management of deforestation prevention programs, protected area programs, and land use programs” that were reportedly to be addressed by it. It is also curious that, for an operation that was presented to the IDB Board in February 2006, the Guarantee Proposal refers in future terms to an event “to be performed by the Bank in 2005” without stating whether this event had, in fact, occurred, and, if so, what its results were. It is clear, however, that in the absence of well-designed and well-implemented such programs in the road’s zone of influence, the potential indirect environmental and social impacts of the IIRSA Norte project cannot be effectively addressed, and certainly not by the road concessionaire alone. And, based on what is stated in the Guarantee Proposal, even if the project’s own reported environmental and social management plans are well-implemented and carefully monitored and

¹⁰⁰ Ibid., paras. 4.21-4.22, pp. 28-29. And it also affirms that “the Bank is strengthening participating agencies to supplement the institution strengthening and environmental monitoring programs.” (para. 4.23, pg. 29) My emphasis.

properly supervised by CAF and the Bank, they do not appear to do this. In other words, improved communication and dissemination, institution-strengthening, environmental monitoring, and enhanced control systems for the traffic in lumber, illegal crops and hazardous materials, important and necessary as they are, are far from sufficient to avoid, minimize or control the substantial potential induced development effects and their potential adverse environmental and social consequences likely to be associated with the IIRSA Norte road improvements in its area of influence, however defined, and these impacts seem to have been generally overlooked by the Bank in setting up the Guarantee.

X. The Strategic Environmental Assessment (SEA)

From what is stated in the Bank's Guarantee Proposal, it appears that how -- and how well -- the indirect environmental and social impacts likely to be associated with the IIRSA Norte road improvement investments will be addressed will nevertheless depend on effective implementation of the measures recommended in the SEA for this project -- which, however, are not themselves spelled out in the Guarantee Proposal -- and, for which, it would appear the MTC would be at least partly responsible. It is, thus, worth briefly examining the conclusions and recommendations of this SEA, which is also specifically mentioned in the Bank's Guarantee Contract with the Peruvian Government, starting with how it determined the project's area of influence.¹⁰¹ It is not clear; however, if the Bank Guarantee documents consider the project's direct and indirect areas of influence to be defined in the same way.

The SEA defined the area of influence of IIRSA Norte as follows. First, it identified the "regions located in the Northern Amazonas Road Corridor, including their provinces and districts," considering the trunk road itself as an "integration corridor." Population density maps were also elaborated. Then, over this political division, it traced the "road network consisting both of the project's trunk road and its feeder roads that link districts, towns and villages." The traffic flows among each of these agglomerations and the main road were also measured to determine distinct "transit zones." In combination, these "transit zones" along the entire length of the "integration corridor" are considered to form the project's direct area of influence and the

¹⁰¹ See José Enrique Millones O., Coordinator, et. al., *Evaluación Ambiental Estratégica (EAE) de la Operación del Corredor Vial Amazonas Norte en el Perú – Informe Final*. Despite its name the version of the SEA, which was carried out by a group of specialized consultants led by Mr. Millones, an engineer, contained in the Bank's project files does not appear to definitive one, however, since there are numerous editorial changes in track changes in the introductory section and elsewhere (Chapter 6, for example).

“more distant zones where trips to the integration corridor originate or terminate” are considered to be its indirect area of influence. Local watersheds (“*cuencas*”) potentially affected by the project are also considered to be part of its area of influence. Elsewhere, the SEA also observes that the direct area of influence of the project includes a “10 to 40 kilometer zone (“*franja*”) along the trunk highway, approximately.”¹⁰² Field work for the SEA then involved specific field studies in the previously defined direct and indirect areas of influence of the road three major ecological regions cut by the road and divided into three major sub- or eco-regions: the coast, highlands (“*sierra*”), and Amazon (“*selva*”).¹⁰³ Altogether, the SEA estimated that the direct area of influence of IIRSA Norte involved some 1,961,273 hectares and the indirect area another 7,435,647 hectares, or, jointly, a total area of 93,969 square kilometers.¹⁰⁴

This procedure to empirically determine the project’s actual *direct and indirect* areas of influence, which can, of course, change over time, is superior – at least in an area which has already witnessed considerable settlement and productive occupation -- to that followed by the Bank in the case of the Interoceanica, where an ultimately arbitrary distance of 50 kilometers on either side of the main road (see above) was taken to define its *indirect* area of influence. It is also noteworthy that, at least for purposes of the SEA, the direct area of influence of the road not only includes the specific right of way of the trunk highway itself, but also that of the many feeder roads that lead into it. The de facto implied definition of the project’s direct area of influence in the Bank’s Guarantee documents -- i.e., the area over which the concessionaire has legal responsibility for meeting certain (undefined) social and environmental commitments at least during the construction phase¹⁰⁵ -- is not as broad, as it presumably does not also include the aforementioned feeder roads, so there appears to be a significant difference with the SEA in this regard.

For each of the three major eco-regions (i.e., coast, highlands, and jungle) that the project’s area of influence traverses, the SEA then proceeded to systematically assess the following biophysical aspects: climate and meteorology, including the effect of El Niño in the area; hydrology, including critical watersheds; natural resource conservation problems; geology and geomorphology; soils; land use capacity; actual land use; ecology and natural habitats (or

¹⁰² Ibid., pg. 13.

¹⁰³ Ibid., Figure 1 on pg. 14 provides an idea of the areas involved.

¹⁰⁴ Ibid., pg. 56.

¹⁰⁵ There is no definition of either the project’s direct or indirect area of influence in either the Bank’s Guarantee Proposal or its Guarantee Contract with the Peruvian Government, however. My emphasis.

what it refers to as “zonas de vida”); flora; and fauna.¹⁰⁶ This is followed by an assessment of “environmental sensitivity and risks,” which concludes that just over one-third of the area of influence is of “very high” sensitivity and another 14 percent of “high” sensitivity, together constituting nearly half of the total area.¹⁰⁷ The SEA then presents the results of a “ socio-economic diagnosis” of the entire area of influence covering the six regions, 18 provinces, and multiple districts that together compose the project’s area of influence.¹⁰⁸ This analysis included the following topics: geographic location and occupation/settlement patterns; demographic aspects, including population dynamics, population centers, migration, population projections, and indigenous communities (by location, ethnic group, specific cultural characteristics, and socio-economic and cultural implications of the road axis);¹⁰⁹ social aspects, including health, education, and social infrastructure; economic aspects, including human resources, gross internal product and economic sectors, economic activities (i.e., agriculture, ranching, mining, fisheries, forestry, industry, export activities, and tourism); transport infrastructure and services (including land, port, and air); and the poverty situation.¹¹⁰ It then synthesizes the principal results of these two major assessments¹¹¹ and examines in considerable detail existing international agreements, including with respect to IIRSA, Peruvian Government policies, and national, sectoral, interregional, and regional plans and programs of relevance to “operation” of the Amazonas Norte road corridor.¹¹²

The SEA next proceeds with an analysis of scenarios for the short (2004-08), medium (2009-13), and long (2014-23) terms and, in doing so, considers the situation without the project and two with project situations, which are labeled “business as usual” (or “*tendencial*”) and “optimistic,” respectively. It then identifies specific interventions, analyzes them and their associated environmental impacts, recommends “prevention” or “potentializing” measures to be adopted (“*medidas de prevención y/o potenciación a adoptarse*”) and the agencies responsible for implementing, enforcing or complying with them for each scenario and time period, and, finally, summarizes the results.¹¹³ In a separate chapter, it assesses the project’s primary and

¹⁰⁶ SEA, *op. cit.*, pp. 56-99.

¹⁰⁷ *Ibid.*, Table 5.23, pg. 100.

¹⁰⁸ *Ibid.*, Table 5.24, pg. 104.

¹⁰⁹ This extensive discussion is contained in pp. 113-130 of the SEA.

¹¹⁰ *Ibid.*, pp. 103-201.

¹¹¹ *Ibid.*, pp. 202-209.

¹¹² *Ibid.*, Chapter 6, pp. 210-248.

¹¹³ *Ibid.*, Chapter 7, pp. 249-301.

secondary negative and beneficial socio-environmental impacts. “Primary” negative impacts are defined as those due “directly to the operation of the road corridor and vice versa that can put its operability (*operatividad*) at risk.” Secondary such environmental impacts are those “that will result indirectly from the operation of the road corridor and vice versa, which do not result in the interruption of its operability.”¹¹⁴ Again, for each such impact identified, the SEA provides “suggestions” for measures to address it, identifies relevant plans, policies and programs, as well as the institutions involved. “Beneficial” impacts, in turn, are identified in terms of the specific “induced situation,” including, for example, “making the economy more dynamic (*dinamización*).”¹¹⁵

The potential generic adverse socio-environmental impacts of the operation of the IIRSA Norte corridor identified by the SEA -- only some of which are briefly mentioned and none described in any detail in the Bank’s Guarantee Proposal (see above) -- include the following:

- Increase in illegal timber extraction, contraband and drug trafficking activities and change in the hydrological cycle.
- Uncontrolled and/or chaotic growth of the population centers, affecting the urban-rural infrastructure and land tenure.
- Generation of fragile and vulnerable zones subject to landslips and landslides (“deslizamiento y derrumbes”).
- Occurrence of the El Niño phenomenon, which could affect the road infrastructure, causing the interruption of vehicular traffic.
- Increased “transculturation” of indigenous peoples, observing further -- in contradiction to what is stated in the Bank’s Guarantee Proposal and perhaps also its Indigenous Peoples safeguard policy -- that this includes indigenous communities located in the project’s direct area of influence.¹¹⁶
- Alteration of air quality and, consequently, increase in the health problems originating in environmental contamination.

¹¹⁴ Ibid., pg. 303.

¹¹⁵ Ibid., pp. 302-324.

¹¹⁶ More specifically, the SEA affirms (pg. 321): “The indigenous communities that are located in the direct area of influence of the Amazonas North road corridor (CVAN), such as the Aguarunas and Kechwa Lamistas (both in San Martín), could suffer an intensification of the ‘transculturation’ process, due to likely expansion of economic activity that will likely bring greater contact between these indigenous groups and the merchants, which could degenerate into opposition on the part of these communities to the operation of the CVAN, affecting the sustainability of the road corridor.” My translation.

- Loss of tourism attractions, affecting landscape quality, and loss of biodiversity.
- Contamination of rivers and/or water courses and soils as the result of inadequate management of solid and liquid wastes caused by the deficit in sanitation services and their functioning.
- Interruption of the operation of the road corridor caused by interventions by the affected population and/or native communities.¹¹⁷

This is a much broader set of potential indirect negative environmental and social impacts of the IIRSA Norte project than are mentioned in the Bank’s Guarantee Proposal or referred to in the respective Guarantee Contract, including possible impacts on indigenous peoples in the road’s direct area of influence. The SEA also identifies a set of likely positive impacts, some of which, such an increase in land values and improvement of the secondary road system, could also have indirect negative environmental and/or social consequences:

- Increase in commercial activity, developing the export and import of products.
- Development of ecological and other forms of tourism.
- Increase in the commercial value of land along the road corridor.
- Generation of new jobs, improving the quality of life of those involved.
- Promotion of the construction and/or improvement of the secondary road network.
- Adequate exploration of natural resource and control of their use.¹¹⁸

The SEA concludes with a set of policies for a socio-environmental management plan (S-EMP), including for indigenous communities in the project’s area of influence, followed by a proposal for this plan itself. Among the ecological/environmental policies it identifies, for example, are: (i) ecological organization (“ordenamiento ecológico”) in the Paita coastal zone; (ii) recuperation and preservation of natural areas in the direct area of influence of the project; (iii) sustainable development of the Amazonian region in the direct area of influence of the road; and (iv) management of the natural resources in the Amazonian territory in the direct area of influence of the road corridor. It also proposes territorial, transport, normative-institutional and socio-cultural policies. The normative-institutional policies, for instance, cover: (i) legal strengthening in the area of influence; (ii) control of territorial occupation in urban areas; (iii) control of territorial

¹¹⁷ Ibid., pp. 319-322.

¹¹⁸ Ibid., pp. 322-324.

occupation in rural areas; (iv) efficacy of the environmental “normativity” and “institutionality;”(v) environmental institutional management at the national, regional and local levels; and (vi) environmental management instruments.¹¹⁹ In short, the SEA recommends a broad set of land use, environmental management, and socio-cultural policies as the basis for its proposed environmental and social management plan for the IIRSA Norte corridor, the vast majority of which are overlooked – or, at best, never specifically mentioned – in the Bank’s Guarantee Proposal and Guarantee Contract with the Peruvian Government.

The S-EMP proposed by the SEA, finally, has the following general objective: “ensure that the operation of the Amazonas Norte Road Corridor (CVAN) effectively contributes to human development through the reduction of poverty and sustainable regional development (economic growth, social equity, environmental conservation, and promotion of the sustainable use of natural resources), resulting in the improvement of the quality of life (“*nivel de vida*”) of the population located in the direct and indirect area of influence of the CVAN.”¹²⁰ The Plan consists of two types of interventions: Specific and Regional Development Programs. The former “detail measures in specific thematic areas within the road’s direct area of influence to be implemented during the first five years of the concession (short-term measures) and for which there is an estimate of costs and specific financing, linked directly to the programmed investment.”¹²¹

Despite this statement, it is not possible to determine whether the Specific Programs and their associated costs were, in fact, incorporated into the project and its financing by CAF and the Peruvian Government. And if they were incorporated, it is impossible to know how – and how well – they are being implemented in practice, although it would be important that the Bank, as Guarantor, and CAF, as the project’s external financier, systematically do so. This notwithstanding, the Specific Programs, as proposed, have four general components: (i) social and institutional insertion; (ii) territorial planning, with subcomponents for management of critical areas and local territorial organization (“*ordenamiento territorial*”); (iii) monitoring and control, with subcomponents for environmental monitoring, control of illegal activities, and contingency management; and (iv) follow-up (“*seguimiento*”).

¹¹⁹ Ibid., pp. 325-330.

¹²⁰ Ibid., pg. 333.

¹²¹ Ibid., pg. 338. The SEA also notes that “it is important to highlight that the scope of these programs is regional, even when their theme is specific and are circumscribed to the Direct Area of Influence.”

The proposed Regional Development Programs, in turn, provide general guidelines for regional development to be implemented in the indirect or “regional” area of influence of the project over the longer run and whose costs and financing are not directly linked to the investment, “such that the identification of additional sources which could correspond to existing plans and programs need to be identified.”¹²² Together, these programs incorporate “the distinct environmental measures that seek to mitigate the negative impacts or to ‘potentialize’ (*potenciar*) the positive impacts identified in the SEA.” Nine Regional Development Programs have been elaborated and are reportedly further described in an annex to the SEA,¹²³ specifically: (i) sustainable development management mechanisms for the Amazonian territory; (ii) “integral” rural development; (iii) sustainable exploitation (“aprovechamiento”) of dry forest (“bosque seco”); (iv) regional tourism development; (v) improved competitiveness of medium and small enterprises; (vi) formulation and implementation of urban development master plans (“*planes directores*”); (vii) consolidation of the accessibility of the CVAN; (viii) recuperation and conservation of the road system; and (ix) improvement in the design of feeder roads to CVAN. A multi-agency Regional Development Council -- constituted by representatives of MTC, INRENA, and local communities, among others -- is proposed to oversee implementation of these Regional Development Programs.¹²⁴

In summary, the comprehensive S-EMP proposed by the SEA clearly seems to go well beyond the scope of the environmental and social “commitments” referred to in the Bank’s Guarantee Proposal and Guarantee Contract for the IIRSA Norte project. As noted above, while the SEA is, indeed, mentioned in these Bank documents, the only “special condition” – or condition of any sort -- associated with it is that “it must be demonstrated that the MTC has made progress in implementing the programs accorded priority in the strategic environmental assessment, including the drafting of an agreement with INRENA.” The Bank’s documents neither define which of the programs in the SEA, which are never specifically identified, were “accorded priority” -- although these could perhaps be inferred to be the Special Programs briefly described above -- nor what “progress in implementing” them means in practice. In addition, they do not indicate who or what entity was supposed to make this determination nor

¹²² Ibid., pg. 338.

¹²³ This annex, however, is not contained in the document electronically available in the Bank’s files.

¹²⁴ All of this, including a more specific description of each of the Specific Programs identified, is laid out in Chapter 10 of the SEA, pp. 331-414.

do they make any reference to social and/or environmental programs in which MTC is not directly involved. And nowhere in the Bank documents are its own monitoring and supervision responsibilities in this regard – or in relation to the project more generally – explicitly spelled out.

XI. Lessons from the Interoceanica/IIRSA Sur and IIRSA Norte Experiences in Peru

Bank road-related and associated environmental and social management interventions (or potential interventions in the case of IIRSA Norte) in both the Interoceanic/IIRSA Sur and the IIRSA Norte highway corridors raise a number of interesting questions, which have been touched on in the preceding sections and won't be repeated, as such, in this concluding part of the paper. They also generate a number of significant lessons that should be seriously considered – and ideally adopted – by the Bank both in its ongoing major road improvement-related operations and in its future projects, especially in areas of significant ecological and/or socio-cultural diversity and/or sensitivity. Each one will be briefly described below.

1. The **first key lesson** from the two IDB road-related project experiences refers to the definition of their respective areas of influence. The Interoceanica and IIRSA Norte projects illustrate two different possible approaches to this: (i) arbitrarily defining a fixed corridor of a certain width along either side of the road (50 kilometers in the Interoceanica case); or (ii) empirically determining an area of influence on the basis of the existing feeder roads and settlements in the region through which the trunk road passes, as was done for purposes of the Strategic Environmental Assessment (SEA) for IIRSA Norte. The latter approach makes particular sense in areas where the trunk road is already in place – or largely in place – and is being paved and/or otherwise upgraded, as long as the area of influence so defined is sufficiently flexible that it can be extended as new feeder roads – and/or extensions of existing such roads – and settlement are established (generally at a greater distance from the trunk road) over time. The former approach, however, may be more sensible in frontier areas where the new or improved trunk roads are likely to induce considerable amounts of new development as a result. In either case, it is essential both to define these direct and indirect areas of influence – and to clearly distinguish between them for

purposes of needed and/or required environmental and social management plans -
- from the outset and to ensure that this is clearly evident in Bank project documents, including legal agreements.

It is also noteworthy that, in the two cases reviewed above, there seem to have been two different definitions of the road's direct area of influence. Bank project documents, presumably including contractor or concessionaire contracts themselves, generally seem to suggest that the direct area of influence of a major road such as the Interoceanica or IIRSA Norte refers essentially to its immediate right of way and adjacent areas used as borrow pits, dumping sites, and construction worker camps. The SEA for IIRSA Norte, however, defines the road's direct area of influence by also taking into account existing feeder roads and settlements together with the right of way of the trunk road alone, then identifying more peripheral areas, including watersheds, likely to be affected over time by the road improvement as its indirect area of influence. However, while this is never made clear in the Bank's Guarantee Proposal and Contract for IIRSA Norte and even though both of these documents explicitly refer to the SEA, it appears likely that the Bank assumed that the direct area of influence of this road was that immediately affected by the construction works only – i.e., those areas over which the concessionaire has direct control -- and not the broader area considered by the SEA.

2. More generally, and this is the **second major lesson, in considering and assessing indirect project environmental and social impacts, especially in ecologically and socio-culturally diverse and sensitive areas such as those crossed by the Interoceanica and IIRSA Norte, there needs to be a one-to-one geographical or spatial correspondence between the projects' anticipated physical and economic benefits and its potential environmental and social costs, both direct and indirect.** The SEA for IIRSA Norte attempts to do this, but it does not appear from the text of the Bank's Guarantee documents that this was also the way the IDB approached this issue. To the contrary, while the Bank does point to the expected -- and, indeed, desired -- positive regional development outcomes expected to be generated as a result of upgrading the trunk IIRSA Norte

road, mainly in economic terms, it fails to adequately identify the potential corresponding adverse environmental and social impacts associated with these potential benefits. These documents also gloss over both many of the potential negative environmental and social impacts of the project explicitly identified in the SEA and many of the recommendations to address them, including with respect to indigenous peoples. This is a serious shortcoming and may even be a direct violation of Bank safeguard policies, particularly with regard to the protection of indigenous peoples.

3. A **third lesson** is related to the second, and refers specifically to the decision to undertake a SEA, as well as a more traditional EIA, for IIRSA Norte. It is not clear what role, if any, the Bank played in this decision, but it was the correct one. It is also not clear whether a similar exercise was carried out for the Interoceanica, but, if not, it certainly should have been. In both cases, the Andean Development Corporation (CAF) is directly involved in financing the major road improvements in the more sensitive Amazonian portions of the road -- and of the road as a whole in the case of IIRSA Norte -- and, thus, may have required the SEA in the case of the latter. However, the more important consideration is that, **since an SEA was, in fact, performed, the financing agencies, including the IDB as Guarantor for IIRSA Norte, should clearly and completely spell out its results and recommendations -- ideally summarizing them in the main text and providing greater detail in a specific annex to the project document. The financing agencies should also support the consistent and effective implementation of the latter during both the construction and operation phases of the project, including through specific contractual conditions in this regard**, neither of which was the case with the Bank's handling of IIRSA Norte.

The Bank, of course, is entitled to disagree with specific SEA – and/or EIA -- findings and recommendations based on the results of its own independent environmental and social analysis or review. However, if it does so, **this should be made explicit in project documents**, as should the reasons for such disagreement. The Bank should not simply overlook, misstate or distort these

findings and recommendations, especially when it holds out the SEA (and/or EIA) as part – indeed, the analytical basis -- of its own environmental and social due diligence process, as appears to have been the case with the IIRSA Norte Guarantee.

4. A **fourth essential lesson**, which is also embodied in the aforementioned SEA, is that **Bank-supported projects that involve major improvements (i.e., construction and/or paving) to extensive trunk roads such as the Interoceanica Sur and IIRSA Norte highways, whether they are part of an international highway link or not, are likely to result in significant induced development impacts, both positive and negative.** This is especially likely to be the case in natural resource rich “frontier” regions, which, at least in the South American context, are also likely to house vulnerable indigenous and other (e.g., extractivist and/or subsistence farmer) populations. Thus, even if the primary stated objective of such projects is to strengthen interregional or international (physical and economic) integration and competitiveness, it is also likely to have substantial local development impacts. In short, both by significantly reducing transport costs to and from and increasing access to (renewable and non-renewable) natural resources in such areas, independently of whether this is a declared project objective or not, it is likely to spur new rural and urban settlement, land occupation, forest conversion, and other forms of social and environmental change, which need to be carefully assessed and managed.
5. **Doing so, as the SEA for IIRSA Norte clearly indicates, will require a broad range of social, environmental, and other measures (e.g., territorial and land use planning, institutional capacity building, etc.) in the project’s direct and indirect area of influence over the short, medium, and longer term in the form of a multi-sectoral and multi-institutional regional sustainable development program.** This is the **fifth key lesson** of the project experience reviewed above and is entirely consistent with the approach, in fact, taken by the Bank in its two earlier major road-related projects in the Amazonian state of Acre

in Brazil.¹²⁵ However, there does not appear to have been much internal learning across these two similar sets of road-related operations in these two neighboring countries, at least there is no mention of its previous Acre experience in the Bank's project documents for the IIRSA Sur and IIRSA Norte corridors.

6. In this regard, moreover, and as a **sixth lesson, once it has established “good practice” as in the Brazil/Acre case, the Bank should take a similar approach to similar situations in different countries, especially, as in the present case, when they are located on either side of the same international border.** Should specific local circumstances require and/or justify taking a different approach or making certain adjustments to the one that had previously proven to be effective, this is fine as long as the reasons for doing so are explicitly indicated. In any event, it would be useful **to indicate in project documents which alternatives were considered and why the one eventually selected was chosen over the others.**
7. As a corollary to the above and a **seventh lesson**, in addition to the need to ensure consistency in its approaches to similar development challenges in different countries over time, this also indicates **the need for the Bank to carefully monitor, evaluate, and draw the relevant lessons from its past and ongoing project experience, especially in similar situations, and then to apply them systematically in the preparation, implementation, and supervision of its future operations.** As with the previous lesson, this is a generic one, and thus applies to project development more generally and not just to their environmental and social due diligence aspects.
8. An **eighth lesson is the need to take cumulative indirect environmental and social impacts into account in projects involving many small road segments**, as in the Decentralized Rural Transport Program (PE-L-1011), jointly financed by the IDB and the World Bank. This project, depending on the actual location of the rural roads whose improvement is financed, may also impact the areas of influence of the Interoceanica Sur and IIRSA Norte highways. Independently of

¹²⁵ See John Redwood III, *Managing the Environmental and Social Impacts.....*, op. cit. Specific lessons presented in this document, however, are not repeated here.

this, however, to the extent that numerous such roads are upgraded in the same specific regions, it could well have significant cumulative indirect effects that need also need to be carefully identified, assessed and addressed even if, as the project report affirms, the impacts of each individual segment is, indeed, quite localized and minimal. At present, this project does not seem to consider such potential impacts or include measures to monitor and manage them.

As noted above, as in the aforementioned rural roads project, road-related investments in both the Interoceanica Sur and IIRSA Norte corridors also involve another financial intermediary, in this case the Andean Development Corporation, which is also the Bank's partner in the much broader IIRSA program more generally. Specifically, CAF is financing the actual road improvements in both the Amazonian portion of the Interoceanica highway and appears to be co-financing with the Bank – although the Bank's respective Donors Memorandum does not specifically mention this -- some of the activities being implemented by Odebrecht Association and its partners under the Conservancy and Sustainable Development Project that is partially and jointly co-financed by MIF and an Italian Trust Fund under Bank management (i.e., PE-M-1056/RE-T-1157). CAF is likewise financing the upgrading of IIRSA Norte for which the Bank has provided a parallel Guarantee (and eventual loan, if needed) to the Peruvian Government. However, in none of these three cases is the de facto division of labor, including the respective monitoring and supervision responsibilities -- both with respect to environmental and social safeguard compliance and more generally -- between the Bank and the other financing entities involved clear in the respective IDB project and/or Guarantee documents.

More broadly, the need to take cumulative impacts into account also applies when other major infrastructure and/or productive investments are taking place in or planned for the project's direct and indirect areas of influence.

9. The associated – and **ninth** – lesson is that in cases where road-related (and other, particularly large infrastructure) projects are being supported by more than one donor, especially in ecologically and socio-culturally diverse and sensitive regions, Bank project -- including Guarantee -- documents

should explicitly spell out the respective roles and responsibilities, including with respect to monitoring and supervision, to be assumed by each of the financing parties involved, whether jointly or individually. This is particularly important with regard to project social and environmental due diligence and management aspects. In the absence of such a clear and explicit definition, there is a considerable possibility both that important aspects of project development and associated (direct and indirect) environmental and/or social impacts may “fall through the cracks” and/or that the Bank may be exposed to considerable -- and potentially costly -- reputational risk.

10. Fully consistent with lesson five above, the **tenth lesson is that, in cases where major improvements to a major road corridor – again, independently of whether it is a national, as in the case of IIRSA Norte, or international corridor as in that of the Interoceanica Sur – these road investments should be viewed and addressed, both for strategic planning and subsequent implementation, (including social and environmental impact identification and mitigation) purposes, more broadly as part of multi-sectoral “economic” or “development” corridor programs.** As noted above, this is both essentially how the Bank proceeded in Acre, Brazil and how the Asian Development Bank is working in the Greater Mekong Subregion in Southeast Asia.¹²⁶ Furthermore, in such cases, **undertaking a Strategic Environmental Assessment (SEA) in the project’s direct and indirect area of influence is not only highly recommended but, as in the potential case of IIRSA Norte, can provide a sound analytical basis for developing just such a corridor-wide development program,** which makes it even more essential. It thus behooves external financial institutions, such as the IDB, together with their country clients and other development partners, to proactively and effectively use such valuable strategic

¹²⁶ For more information in this regard, see John Redwood, *Spatial Approaches to Sustainable Development: The Asian Development Bank’s Role and Experience in the Greater Mekong Subregion, Its Relevance for the IDB, and Possible Application to the Amazon Basin*, consultant’s report to the IDB, Washington, D.C., July 2011, and Asian Development Bank, *Sharing Growth and Prosperity: Strategy and Action Plan for the Greater Mekong Subregion Southern Economic Corridor; Toward Sustainable and Balanced Development: Strategy and Action Plan for the Greater Mekong Subregion North-South Economic Corridor; and Strategy and Action Plan for the Greater Mekong Subregion East-West Economic Corridor*. All three of these publications are dated August 2010 and available online at the ADB’s Greater Mekong Subregion (GMS) website.

assessment and planning tools to help design the required multi-faceted short, medium and long-term development programs for these important corridors.

11. An **eleventh lesson** is that **project legal documents, especially when these refer to environmentally and socially safeguard-related disbursement and other conditions, should be specific as to what specific conditions need to be met, what agency is responsible for meeting them, and how this will be determined.** The IIRSA Norte Guarantee Agreement clearly fails to do this when it states, as a condition, that “it must be demonstrated that the MTC has made progress in implementing the programs accorded priority in the strategic environmental assessment, including the drafting of an agreement with INRENA.” As noted above, there is no indication as to which programs were “accorded priority” in the SEA, or by whom, or what demonstrating that the MTC “has made progress” in implementing such programs means, or who would attest to this fact and how. In addition, it overlooks the fact that many of the programs identified in the SEA would not be implemented by MTC or by MTC alone. What about the other priority programs? To be truly meaningful and effective, legal conditions need to be much more specific.
12. **Finally, Bank Project Completion Reports (PCRs) should be required to indicate how – and how well -- project environmental and social safeguard and management issues and aspects were handled during implementation and explicitly assess the quality of Bank performance during supervision in this regard.** The PCR briefly reviewed above for the completed Roads Rehabilitation and Improvement Project III (PE-L-0197) provides absolutely no information in this regard. If the Bank is to learn from its own project experience with respect to the application of its safeguard policies and with regard to how it is managing social and environmental concerns in the context of the investment, including Guarantee projects it is supporting more generally, whether for road transport or in other infrastructure and productive sectors, requiring that such information be systematically reported is an important pre-condition.

Annex 1: The Decentralized Rural Transportation Project -- PE-L-1011

The Decentralized Rural Transportation Project (DRTP) was approved in November 2006, signed in April 2007, and is still under implementation. It was jointly prepared with and financed by the World Bank, as part of an ongoing collaboration between the two institutions in the rural roads sector in Peru. The project involves a US\$ 50 million IDB loan, of which more than three-quarters has been disbursed to date, according to the Bank's external website. As noted in the main text, its declared objective is "to make public, economic, and social services physically more accessible to the rural population by improving local road systems"¹²⁷ and it may include improvement of rural roads that lead directly or indirectly into the Interoceanica, IIRSA Norte and other major trunk roads. To accomplish its objective, the program will work primarily "to improve the decentralized public supply and maintenance of rural transportation infrastructure and to promote the development of economically productive transportation infrastructure-related initiatives."¹²⁸ The executing agency is MTC. The IDB's loan proposal document indicates that Peru's:

rural transportation infrastructure comprises the rural road network, the river system and its piers and jetties, small airfields, and dirt trails. Its main component, the [tertiary and local] road system, covers a total of 46,900 km¹²⁹ and offers accessibility to 30% of the population and 90% of the country's urban centers. Over 70% of this system is in poor condition. The absence of serviceable roads is the result of a lack of maintenance and difficult topographical and climate conditions making their use impossible or very costly. This has hindered development and contributed to the isolation of poor rural communities. The exception is more than 15,000 km of roads that have been restored and maintained since 1995, with Bank support.¹³⁰

¹²⁷ Inter-American Development Bank, *Peru: Decentralized Rural Transportation Program (PTRD) (PE-L1011)*, Washington D.C., November 2006. Project Summary. The World Bank also provided a loan for US\$ 50 million toward the project's estimated total cost of US\$ 150 million.

¹²⁸ *Ibid.*, Project Summary.

¹²⁹ According to this source, however, "in the road plans that have been developed, the network of local roads has been found to be more than twice the officially recognized amount," or over 100,000 kilometers (*Ibid.*, footnote 1, pg. 2).

¹³⁰ *Ibid.*, para 1.6, pg. 2. In addition, at that time there were some 17,000 kilometers of national roads (see the next section) -- of which 49.5% were paved and, of this percentage 36% were in good condition, while 37.5% were unpaved, of which only 13.2% were in good condition -- and 14,300 km of secondary or departmental roads.

This, in fact, is the third joint IDB-World Bank operation in support of decentralized local road management through rural transportation infrastructure renovation in Peru.¹³¹ Upon its completion, the second project was expected to have restored more than 12,350 km of rural roads, 2,700 km of secondary roads, and 6,300 km of dirt trails while providing periodic maintenance to 7,033 km and 2,400 km of local and secondary roads, in addition to incorporating all of these roads and trails into a permanent routine maintenance program.¹³² The project description in the loan proposal document provides additional information about this initiative, including what are referred to as its “socio-environmental development” activities:

The PTRD is a multiyear program. The process of identifying and selecting the high number of simple low-cost works is performed by local communities and local authorities using Participatory Provincial Road Plans (PVPP), which facilitates program execution, since it promotes a sense of ownership among the authorities and the community....

The PTRD will consolidate the process started in 1995 and intensified beginning in 2001, and will expand it nationwide....

The proposed program *restores and maintains economic infrastructure*. By providing increased physical access to the communities, it will help to step up the social services available and to make them more efficient. Thus, in rural and relatively isolated areas, it facilitates market integration....

The PTRD attaches great importance to local capacity development. Specifically, it will support: (i) *institutional development*: boosting the capacity of the responsible agencies, incorporating proven road management practices through outsourcing and the application of transparent procedures, encouraging the participation of the community and the local authorities in identifying priorities, planning, and monitoring the activities performed, aligning investments with local needs identified in regional development plans and the PVPPs; (ii) *technical and socio-environmental development*: creating and restoring unpaved roads with low-cost technical standards, which, while ensuring their stability and durability, are compatible with the level and composition of demand, thus reducing investment costs, incorporating road conservation practices that guarantee the full design

¹³¹ More specifically, the first stage of the Rural Roads Program (PCR) received US\$ 90 million loans from both the IDB (PE-L-0136) and the World Bank toward a total cost of US\$ 270 million and was completed in December 2000. Phase two (PE-L-140 also for US\$ 50 million), was still under implementation at the time this project was approved and was expected to be completed in March 2007.

¹³² Ibid., para. 1.18, pg. 5.

service life and applying appropriate socio-environmental and community participation practices....; (iii) *financial development*: redirecting road expenses that are currently incurred by local governments, targeting them toward priorities identified in the PVPPs, [etc.]....; and (iv) developing the local market for consultants (engineering designs, work oversight, socio-environmental studies) and small works contractors, so that local governments have valid contracting alternatives for road projects.¹³³

The project has six components: (i) transportation infrastructure works, studies and supervision; (ii) local capacity development; (iii) policy development, regulation, and rural transportation institutional framework; (iv) rural transportation and development; (v) monitoring and evaluation; and (vi) program management and administration. The first and, by far, largest component in terms of estimated cost at appraisal (US\$ 90.2 million for works and US\$ 18.4 million for studies and supervision) consists of the following subcomponents: (i) rehabilitation of local roads (3,000 km in the 24 participating departments); (ii) periodic maintenance of local roads (11,200 km); (iii) improvement of dirt trails (2,500 km of community trails and 150 km of trails used by tourists which require higher design standards and complementary infrastructure such as lookouts and rest areas); (iv) improvement and construction of bridges (approximately 50 on local roads); (v) improvement of other rural transportation infrastructure (such as piers, facilities to improve freight handling, and small airfields); and (vi) a pilot project to stabilize slopes and small watersheds.¹³⁴ The third component was expected to include, among other activities, training in socio-environmental issues of road projects and the review and updating of technical and environmental manuals and handbooks.

The project's rural transportation and development component contains an interesting road development and rural oversight pilot program, which will apparently examine the impact of local road improvements on the value of nearby land.¹³⁵ Although the loan proposal document does not say this, changes in local land values could also affect the nature and intensity of land use, as well as that of its surrounding areas, some of which could be converted from standing

¹³³ Ibid., para 2.5, pp. 10-11. Emphasis in the original.

¹³⁴ Ibid., paras. 2.6-2.15, pp. 11-15.

¹³⁵ More specifically, this pilot program is described in the loan proposal as follows: "The enhancement of the conditions of a network of roads, primarily those serving agricultural and livestock areas, where production, which is, mainly commercial, must go to market, increases in the value of nearby land and its capacity to continuously generate resources; these resources should translate into a growing capacity to pay rural property taxes, which are typically used for road management. The pilot program will develop mechanisms for the collection of rural property taxes.... (Ibid., para. 2.13, pg. 14).

forest into agricultural or ranching activities as a result. This pilot program, accordingly, could have included – but, unfortunately, does not have – a valuable land use change and associated environmental impact monitoring function.

The loan proposal document also contains a specific section on the project’s environmental and social impact, which affirms the following, *inter alia*:

The program generates significant positive socio-economic impacts that translate into a significant improvement in the rural population’s quality of life...[T]he impact assessment on a significant sample of roads addressed in prior phases showed that the restoration and maintenance of rural roads allows for the consolidation of an integrated, reliable road system that facilitates access to basic social and economic infrastructure services and reduces travel time and cost; integrating communities into the subregional centers, expanding markets for agricultural products, and reducing their marketing costs....

As in prior phases, the program works will be small-scale, involving the restoration of rural roads and unpaved trails, without changes in routes and with the execution of works completely within the current rights of way. Based on program experience,¹³⁶ potential environmental impacts can be expected to be direct, small-scale, associated with the construction phase, and may be avoided or controlled by applying the preventive and mitigation measures established in PVD [Provías Descentralizado] technical and environmental guidelines,¹³⁷ and their costs are entered under specific items on the works budgets.

Although the works are similar to those of the prior phases, the program Environmental and Social Management Framework (ESMF) has been developed since the

¹³⁶ In this connection, the document observed in a footnote on pg. 28 that “a socio-environmental audit was performed on the roads restored in [the first phase of the program]; in [the second phase], annual technical and operational audits were conducted, including environmental considerations, and from 2001 to 2005, the Bank conducted eight technical inspections of samples of restored roads in which socio-environmental issues were analyzed. The results show that land was not affected, there was no need to relocate residents, and no actions were taken in protected natural areas or indigenous areas. The direct, localized, temporary impacts were related to the execution of the works – generation of noise and fumes, partial interruption of traffic, temporary limitation of access, erosion, sedimentation, and soil and water contamination. No significant negative indirect impacts have been identified.”

¹³⁷ More specifically, the “Environmental Guide for the Restoration and Maintenance of Rural Roads and Unpaved Roads,” the “Technical and Environmental Manual for the Routine Maintenance of Local Roads,” and the “Technical and Environmental Manual for the Improvement of Trails,” among others, which are listed in a footnote on pg. 28.

decentralization of the execution, the integration of new pilot projects, and the incorporation of the country's other 12 departments require the program environmental and social procedures to be updated and expanded.¹³⁸

In addition to the ESMF, a “methodology” was reportedly developed for the classification of roads “as a function of the socio-environmental risk they may represent, considering the type of work and vulnerability of the natural, social, economic, and cultural environment in their sphere of influence, and specific guidelines for performing environmental assessments in accordance with the corresponding level of environmental risk.”¹³⁹ It was reiterated that, while no road improvement actions would be taken in low-lying rainforest areas “until the results of the [phase 2] pilot project monitoring and evaluation plan are obtained and a sustainable action strategy in these areas is consolidated, with the Bank’s no objection...indirect impacts could be generated in some areas, such as the intensification of development pressures in rural areas, the exploitation of natural resources in wooded areas, and changes in socio-economic conditions for the local population.” Given the small scale of the expected subprojects, however, the loan proposal document affirmed that “these impacts are not expected to be significant, [but] the environmental assessments required for some project categories should include these issues.”¹⁴⁰ Finally, the project’s institutional strengthening component would include several activities “aimed at guaranteeing the proper application of the ESMF in the decentralized context.”¹⁴¹

These measures notwithstanding, it should be noted that, while indirect environmental and social, including possible induced development, impacts are mentioned in the loan proposal document, potential cumulative impacts are not. However, these could be substantial over time if there are a large number of improved roads, even if each one is relatively small, in the same general area. Cumulative indirect impacts, in particular, may be significant, so it is not sufficient to only consider the impacts of each road segment to be upgraded individually. In addition, it is

¹³⁸ Ibid., paras. 4.9-4.12, pp. 28-29. The report also states that the Bank’s Environment (OP-703), Involuntary Resettlement (OP-710), and Indigenous Peoples (OP-765) policies had been “adequately considered in the ESMF, through specific guidelines to be used in the event that any project affects these safeguards.” Even though no actions were planned in indigenous areas nor was any resettlement expected since no road construction or expansion subprojects were anticipated, guidelines as to how to address these concerns would be developed “to establish an integrated framework for socio-environmental management.”

¹³⁹ Ibid., para. 4.13, pg. 29. It is also observed in a footnote that these guidelines “include the identification of critical liabilities affecting the operation of the road, its users, and the adjoining lands” and that “their correction will be included in the project.”

¹⁴⁰ Ibid., footnote 6 on page. 29.

¹⁴¹ Ibid., para. 4.14, pg. 29. These include implementation of a geographic information system (GIS) with electronic environmental and social maps to support the categorization of the project’s risk level and relevant training.

not clear to what extent, in practice – i.e., during actual project implementation and supervision – these potential indirect and cumulative impacts are being adequately identified, monitored, and mitigated. In any case, it does not appear that the project contains concrete measures, resources, or institutional arrangements to identify and address such impacts should they, in fact, occur, either during the period of project implementation or subsequently. This subject merits further investigation, which may only be possible in the field.

Annex 2 Components of the Integrating Conservancy and Sustainable Development in Southern Interoceanic Highway Corridor Project (PE-M-1056/RE-T-1157)

1. Strengthening of Local Governance

The objective of this component is to “build the capacity of major stakeholders in each local community to lead the local governance strengthening process in the geographic areas identified by the project.”¹⁴² The respective Donors Memorandum goes on to state that “the project calls for the creation of local development centers (LDCs), networks for cooperation between local institutions and community leaders based on production opportunities identified and promoted in Component 2 [see below]. These LDCs will serve to facilitate increased community participation in managing the development processes and are the result of a gradual process of integration and investment in local human capital.”¹⁴³ Municipal governments “committed to the initiative” would also be strengthened through: (i) courses for mayors and senior officials in leadership and management of production-oriented initiatives; (ii) technical development of municipal staff who interact with entrepreneurs and production-oriented initiatives; and (iii) support for initiatives by leagues of municipalities to enhance local competitiveness. The component would likewise support the “design and promotion of a ‘Destino Interoceánico Sur’ [Southern Interoceanic Destination] macro-brand denoting the quality and environmental and social sustainability of products and services of the areas along the highway and promote their natural and cultural wealth.” Internships “to provide exposure to institutional structures and technological development” elsewhere in Peru, as well as in the neighboring Brazilian state of Acre, and Bolivia” would also be financed.¹⁴⁴

¹⁴² IDB, *Donors Memorandum*, op. cit. pg. 4. This document also affirms that “conservation of the natural environment and preservation of existing social structures will be more realistic prospects if the local communities themselves manage the processes of economic and social development.”

¹⁴³ *Ibid.*, pp. 4-5. Emphasis in the original. More specifically, LDCs would be established in the towns Ccatcca, Marcapata, Quincemil, Puerto Maldonado, and Iberia and local management capacity would be strengthened through training and technical assistance for (i) identification of local stakeholders and the organizational and cultural characteristics of the communities involved; (ii) design of the organizational model appropriate to each LDC; (iii) human resource development and capacity building for major stakeholders; (iv) training of leaders and promoters in business and technology; and (v) development of new production-oriented activities.

¹⁴⁴ *Ibid.*, pg. 5.

2. Development of Sustainable Production-oriented Initiatives

This component “focuses on the development of sustainable production-oriented ventures that are adapted to the potential of the land and population and can be replicated.”¹⁴⁵ Two areas, in particular, would be supported under this component – eco-business/tourism and handicrafts – with the objective of creating jobs and generating income at the community level “by developing local, endogenous, production-oriented initiatives that are compatible with local capabilities and sustainable over time.”¹⁴⁶ Three such initiatives – for “camelid” production,¹⁴⁷ guinea pig production,¹⁴⁸ and handicrafts¹⁴⁹ – had already initiated at the time the project was appraised, while numerous others were reportedly in the design phase.¹⁵⁰

3. Sustainable Biodiversity Conservation Management

This component seeks to “promote consolidation of conservation areas through sustainable production-oriented activities with the local populations, effectively managed by the relevant authorities to ensure biological connectivity and biodiversity conservation in the corridor’s area of influence.”¹⁵¹ More specifically, technical assistance would be provided to support evaluation of “characteristics and occupations in areas of interest,” including the Tambopata National Reserve buffer zone, the Manu-Tambopata Corridor, and the Manu-Bahuaja Sonone Corridor, in order to “identify the management units that will promote biodiversity conservation under the framework of national laws and their implementing regulations, specifically the Forest and Wildlife Act (Ley Forestal y de Fauna Silvestre) and the Natural

¹⁴⁵ Ibid, pp. 5-6. According to this document, “venture” is used in this context to refer to “a group of microenterprises and small businesses integrated horizontally or vertically.”

¹⁴⁶ Ibid., pg. 6. Such initiatives, moreover, would seek to “incorporate supply chain concepts and enhancements in production and marketing.”

¹⁴⁷ This activity, to be implemented in Ocongate and Marcapata municipalities, would seek to improve the alpaca fiber production process throughout the supply chain and is expected to benefit 1,200 families.

¹⁴⁸ This initiative, in Ccatcca, which would improve guinea pig health conditions, birth rates and feeding, is expected to benefit 150 families.

¹⁴⁹ This activity is expected to operate along the highway and improve the manufacturing and marketing of handicraft products, benefiting an expected 100 families.

¹⁵⁰ According to the Donors Memorandum (pp. 6-7), some of these initiatives relate to tourism and handicrafts, specifically high mountain tourism in the Cordillera del Vilcanota range, special-interest tourism, the Marcapata stopover, and a partnership for native art, while others three relate to ecobusiness: ornamental plants in Marcapata, Quincemil, and Iberia; fish farming; the Ñape Ethnobotanical Center; and supplies of fruit and fruit products in Madre de Dios department. This document also affirmed that “the development of production-oriented ventures may involve external private investment, in which case the investor must meet internal socio-environmental standards for conservation and sustainable social development.”

¹⁵¹ Ibid., pg. 7. The document also observed that “in all cases, local communities will be involved...not only as employees but particularly through mechanisms for ownership participation....”

Protected Areas Act (Ley de Áreas Naturales Protegidas), respectively, which have established private conservation areas, conservation concessions, and ecotourism concessions as the principal tools of private conservation.¹⁵²

4. Monitoring, Lessons Learned and Dissemination

The stated purpose of this component is to “create an information and management system to monitor and evaluate outcomes and document lessons learned.” It would entail, among other activities, “setting the baseline (to include production and social indicators and conservation and/or environmental impact factors) and implementation and maintenance of a monitoring system for activities and outcomes and documentation, validation, and dissemination of experiences.”¹⁵³

¹⁵² Ibid., para. 2.11 and footnote 10, pg. 7. Each process would begin by (i) identifying and characterizing the stakeholders involved, so as identify strategic partners; (ii) signature of agreements with communities and specialized partners interested in receiving technical assistance to implement investment projects; (iii) preparation of technical and legal documents to obtain land use rights; (iv) development of management and business plans for the activities to be conducted; and (v) assistance to the ventures identified to start operations.

¹⁵³ Ibid., para. 2.12, pp. 7-8. The other types of activities identified are: (i) local events and seminars to disseminate and exchange know-how; and (ii) attendance at external events.