



Technical Assistance Report

Project Number: 38618
July 2008

Democratic Republic of Timor-Leste: Preparing the Road Network Development Project (Financed by the Japan Special Fund)

Asian Development Bank

CURRENCY EQUIVALENTS

The currency of the Democratic Republic of Timor-Leste is the United States dollar.

ABBREVIATIONS

ADB	–	Asian Development Bank
C&P	–	consultation and participation
DRBFC	–	Directorate of Roads, Bridges and Flood Control
EA	–	Executing Agency
MOI	–	Ministry of Infrastructure
NGO	–	nongovernmental organization
PPTA	–	project preparatory technical assistance
RNDP	–	Road Network Development Project
RSIP	–	Road Sector Improvement Project
TA	–	technical assistance

TECHNICAL ASSISTANCE CLASSIFICATION

Targeting Classification	–	General Intervention
Sector	–	Transport and communications
Subsector	–	Roads and highways
Themes	–	Sustainable economic growth, gender and development, capacity development
Subthemes	–	Fostering physical infrastructure development, gender equity in opportunities, institutional development

NOTE

In this report, "\$" refers to US dollars.

Vice-President	C. Lawrence Greenwood, Jr., Operations 2
Director General	P. Erquiaga, Pacific Department (PARD)
Director	I. Bhushan, Pacific Operations, PARD
Team leader	H. Masood, Project Administration Unit Head, PARD
Team member	E. Brotoisworo, Senior Safeguards Specialist, PARD
	C. Chen, Infrastructure Specialist, PARD
	S. Tanaka, Social Development Specialist, PARD
	F. Tornieri, Social Development Specialist, RSDD

I. INTRODUCTION

1. The Government of Timor-Leste has requested technical assistance (TA) from the Asian Development Bank (ADB) for preparing the proposed Road Network Development Project for possible ADB financing. Fact-finding was undertaken during 8–17 April 2008 to discuss and formulate the project preparatory TA. The Fact-Finding Mission reached agreement with the Government on the scope, cost estimates, financing, implementation arrangements, and terms of reference for the TA consultants. The TA¹ is included in the country strategy and program update (2006–2008)² and the country operations business plan (2008–2010)³ for Timor-Leste. The design and monitoring framework is in Appendix 1.

II. ISSUES

2. Timor-Leste has an extensive road network of about 6,000 km, half of which are rural roads that are currently undeveloped tracks. The core network comprises 1,400 km of national roads connecting the 13 districts and 900 km of district roads linking major population centers to the national roads. The urban roads in major cities total about 700 km. About 80% (or 1,800 km) of core roads are paved. As the primary mode of transport carrying 70% of freight and 90% of passengers, roads play a vital role in the country's economic development and integration. Recognizing its importance, the Government is keen to develop the road network. During the conflict period, most of the road network, and in particular bridges, was damaged. The road conditions further deteriorated since the country's independence in 2002 due to lack of maintenance. Early emergency efforts by ADB⁴ and other development partners were aimed at restoring accessibility and focused on repairing only the damaged sections of the road network. This improved Dili's connection with most of the country, but overall road conditions continued to worsen due to the Government's inability to meet the maintenance needs. This was further compounded by rains and unstable geotechnical conditions in mountainous areas that cause frequent landslides. The ongoing, ADB-financed Road Sector Improvement Project (RSIP)⁵ reflects the initial attempt to transition from emergency work to sustainable road development, as it includes rehabilitating longer stretches of roads as well as initiatives to test labor-intensive maintenance methods, and community participation in developing rural roads.

3. The national road network consists of the northern and southern coastal road corridors and five north–south roads connecting the two coastal roads. Dili, located on the northern coastal road, is connected to the rest of the country through the national road network. The district roads supplement the national network by extending it to other parts of the country and linking major district administration centers. A detailed study of the road network in 2005⁶ showed that 44% of the paved roads and 89% of the unpaved roads are in poor condition. Although some road rehabilitation works have taken place since then, repairs have been localized and the overall condition of the network has not improved. In fact, information provided by the Ministry of Infrastructure (MOI) indicates that the relatively long rainy season this year has caused major failures from subsidence and landslides on some road sections that has cut

¹ The TA first appeared in the business opportunities section of ADB's website on 25 April 2008.

² ADB. 2005. *Timor-Leste Country Strategy and Program Update, 2006–2008*. Manila.

³ ADB. 2007. *Timor-Leste Country Operations Business Plan, 2008–2010*. Manila.

⁴ ADB. 2000. *Grant Assistance to the Democratic Republic of Timor-Leste for Emergency Infrastructure Rehabilitation Project Phase I*. Manila (Grant 8181-TIM); and ADB. 2002. *Grant Assistance to the Democratic Republic of Timor-Leste for Emergency Infrastructure Rehabilitation Project Phase II*. Manila (Grant 8198-TIM).

⁵ ADB. 2005. *Grant Assistance to the Democratic Republic of Timor-Leste for Road Sector Improvement*. Manila (Grant 0017-TIM, approved on 27 September).

⁶ Under ADB. 2001. *Technical Assistance to East Timor for Transport Sector Improvement*. Manila (TA 3731-TIM). The work was undertaken in 2005 and the final report was published in 2005.

off access to parts of the country. An update of the 2005 study is needed to properly assess the current road conditions and develop a pragmatic program to address road improvement needs.

4. Developing and managing roads are among MOI's several responsibilities.⁷ Its Directorate of Roads, Bridges and Flood Control (DRBFC) plans, develops, and maintains the road infrastructure. This includes ensuring that the road network is not blocked by landslides or other failures and remains operational. DRBFC operates through five regional offices covering the country's entire road network, but it is seriously handicapped by shortage of technical staff.⁸ This has affected DRBFC's operational capacity for strategic planning, procurement and administration of new infrastructure contracts, and ensuring timely maintenance of the road network. MOI is keen to expand its capacity by engaging additional staff, but it is constrained by limited availability of skilled human resources and better incentives offered by the private sector. As a result, MOI is considering other alternatives such as outsourcing.

5. Several initiatives to develop capacity of the existing MOI and DRBFC staff are either complete or ongoing. Under ADB-financed TA,⁹ the DRBFC's mid-level management and technical staff are undergoing formal training in management and leadership, procurement and contract administration, road design, construction, maintenance, materials testing, quality control, and safety. Another ADB-supported TA,¹⁰ co-financed by the Australian Agency for International Development, provides MOI long-term and short-term advisers for hands-on assistance—initially to support in procuring capital development projects and then in building long term implementation capacity. The Japan International Cooperation Agency has completed two initiatives to build DRBFC's capacity in road maintenance and prepared technical manuals and guidelines for road asset management. This also involved training in the use of construction equipment. Under RSIP, the consultants are working on preparing a road maintenance manual using labor-intensive methods. MOI accords high priority to building its capacity by continuing such capacity development programs.

6. The rural roads network that connects towns and communities to the national and district roads and provides access to the rural population is not developed. There could be several reasons for this, including, but not limited to, lack of resources and misplaced priorities prior to independence. It is recognized however that the rural population cannot contribute to economic development, unless it is provided access to markets and means of livelihood. Moreover, the Government's efforts to provide health, education, and other social services, including justice, are constrained by lack of access. Preliminary results from the 2007 update of the 2001 household income and expenditure study indicate a downward trend in the population's accessibility to vehicle-passable roads. By 2007, the accessibility had been reduced from 85% to 65%, and 40% of the rural population had no access. Moreover, travel time to the nearest schools and clinics in rural areas was about an hour.¹¹ The community empowerment component under RSIP, involving communities' direct participation in developing access roads to population centers, has demonstrated a successful approach not only for developing rural roads but also for sustaining the infrastructure. This approach needs to be replicated and expanded to other parts of the country to enhance accessibility to rural areas. Lessons can also

⁷ MOI is responsible for transport (roads, airports, ports, and harbors), energy, and water supply infrastructure.

⁸ DRBFC has only 12 engineers: 7 in the headquarters in Dili and 5 in regional offices.

⁹ ADB. 2005. *Technical Assistance to the Democratic Republic of Timor-Leste for Infrastructure Sector Capacity Development*. Manila (TA 4609-TIM).

¹⁰ ADB. 2007. *Technical Assistance to the Democratic Republic of Timor-Leste for Infrastructure Project Management*. Manila (TA 4942-TIM).

¹¹ Directorate of National Statistics. 2007. *Timor-Leste Survey of Living Standards 2007: Interim Statistical Abstract*. Dili.

be learned from other development partners' similar community-based rural infrastructure development projects.

7. Improving the road network alone will not solve the connectivity and accessibility problem unless road transport services are also improved. The bulk of passenger and freight traffic uses public transport that is mostly privately-owned. The Government has passed laws and approved road codes to ensure a safe and clean transport system and to regulate the road transport services. However, the public transport regulations are not effectively-enforced. Fares set by the Government are seldom used. The transporters determine fares based upon the competition on the routes. While fares are reasonable on some inter-urban routes, transporters generally charge very high fares for travel to rural areas. A survey conducted under the earlier ADB study (footnote 6) showed that almost 90% of more than 100 transport operators surveyed were providing poor quality of service. Improved road network and enforcement of regulations will result in competitive fares and better transport services to rural areas.

8. The Government is keen to create employment opportunities, as the unemployment rate has gone up significantly particularly among the youth. In Dili, the overall unemployment rate is estimated at 23%, and for the youth it has increased to 40%.¹² Thousands of young people join the country's workforce every year. This situation is exacerbated by the presence of a large population of internally-displaced persons. One approach under consideration by the Government is to promote labor-intensive methods for public works to enhance income generation. The Government also plans a national workforce program based on previous experiences and to initiate a pilot activity. A labor-intensive project was implemented by the International Labour Organization in 2007 for infrastructure rehabilitation, and maintenance of rural infrastructure such as roads, bridges, drainage, irrigation, and biogas. An evaluation rated the project as successful and recommended expanding use of this approach. The labor-intensive road maintenance component being implemented under RSIP can provide useful lessons.

9. While MOI supports the labor-intensive approach for income generation and is cognizant that the development partners are keen to incorporate it into their activities, it is also conscious of that approach's limitations. MOI is of the view that labor-intensive approaches are suitable for developing rural roads and for maintenance; but for developing infrastructure of national importance, such as the national roads, international construction standards should be followed to ensure high quality. MOI has allocated \$375,000 for labor-intensive rural road works in each of the 13 districts.¹³ This work is carried out in close coordination with the district administrations.

10. The country's existing National Development Plan¹⁴ places high importance on infrastructure development. It states that, "Infrastructure has perhaps the strongest cross-sectoral implications for national development. Having an effective system of physical infrastructure and services is crucial for agricultural productivity and poverty reduction, but it is also a key determinant of business investment, is vital for human development, and the foundation for private sector development." ADB's country strategy and program (2006–2008) identified transport infrastructure improvement as a key area of ADB assistance. Two emergency road improvement projects (footnote 4) have already been completed and a third

¹² Government of Timor-Leste 2008 National Priorities, prepared for 28–29 March 2008 Development Partners Meeting.

¹³ Based on a positive outcome, MOI may consider expanding this program by allocating an additional \$300,000 per district during the midterm review of the budget in June 2008.

¹⁴ Created in 2002. A new National Development Plan is scheduled to be prepared in 2008.

(RSIP) is ongoing. ADB's country partnership strategy (2009–2013) that is under preparation supports the earlier strategy and continues to focus on transport infrastructure development.

III. THE TECHNICAL ASSISTANCE

A. Impact and Outcome

11. The TA will contribute to the Government's objective of an improved and sustainable road network in Timor-Leste. The TA will help the Government in reducing the cost of transportation and improving the road network for economic development and social integration. The TA will also assist MOI in preparing its national development plan for road infrastructure and identifying institutional and policy reforms needed to improve sector performance. This will be achieved by (i) undertaking a detailed assessment of the road improvement needs, (ii) preparing a national roads improvement program, (iii) preparing a labor-intensive road maintenance program, (iv) preparing a community-participated rural roads development program, and (v) institutional and capacity development of road infrastructure-related agencies under MOI. The TA will assess the suitability of using a sector-wide approach for implementing the proposed project or its components.

B. Methodology and Key Activities

12. The TA will be implemented in two phases. First, it will update the transport sector improvement study (footnote 6). This involves (i) verifying and completing the road inventory; (ii) carrying out road condition surveys to assess rehabilitation and improvement needs; (iii) assessing the existing institutional setup for roads, including the contracting industry, (iv) designing rehabilitation and improvement strategies, and (v) identifying priority roads for improvement. The findings of the first phase study will be presented to the Government and other stakeholders.

13. Based on the responses received, the second phase of the TA will include (i) preliminary design and feasibility of the selected roads, (ii) a program for developing selected rural roads through community participation, (iii) developing a national roads maintenance program involving labor-intensive approaches, (iv) identifying institutional and capacity development needs and preparing a plan for implementation, and (v) recommendations for improving transport services to rural areas. The community-participated rural roads development and labor-intensive road maintenance programs will be guided by the experiences and evaluation of the ongoing activities under RSIP and other related initiatives by the development partners.

14. All project roads identified under the second phase of the TA will be improved along with their existing alignments. Therefore, land acquisition and resettlement will be insignificant. Based on initial assessment of social and environmental safeguards, no issues involving indigenous people or adverse environmental impacts are expected. An initial poverty and social analysis is in Appendix 2. The TA will be implemented in close consultation with MOI and district governments, and it will take into consideration all previous studies carried out by the Government, ADB, and other development partners.

C. Cost and Financing

15. The total cost of the TA is estimated at \$1,000,000. The Government has requested ADB to finance \$800,000 to cover the costs of international and national consultants' remuneration and per diems, international and local travel, surveys, communications,

workshops, office supplies and equipment, and contingencies. The TA will be financed on a grant basis by the Japan Special Fund, funded by the Government of Japan. The Government will contribute \$200,000 in kind to cover the cost of office accommodation, transport, and remuneration to the counterpart staff. The Government has been informed that approval of the TA does not commit ADB to finance any ensuing project. The details of the cost estimate and financing plan are in Appendix 3.

D. Implementation Arrangements

16. The TA will require about 51 person-months of consulting services (26 international and 25 national) and is expected to be completed in 9 months. ADB will engage consultants in accordance with its *Guidelines on the Use of Consultants* (2007, as amended from time to time). A team of international consultants in association with national consultants will be engaged following the quality and cost-based selection method and simplified technical proposals. Seven international and six national consultants will be needed with expertise in (i) transport, economics, and planning; (ii) road engineering; (iii) geotechnical and materials engineering; (iv) road transport services; (v) labor-intensive construction; (vi) environmental assessment; and (vii) social and poverty assessment/safeguards. The international team will be supported by national consultants with expertise in the same areas. The outline terms of reference for the consulting services are in Appendix 4.

17. MOI will be the Executing Agency (EA) and will be responsible for guiding and supervising the TA activities, as well as for coordinating with other relevant Government agencies, district governments, and development partners. The DRBFC, which has direct responsibility for roads, will work closely with the consultants. The TA is expected to commence in October 2008 and is scheduled to be completed by June 2009. MOI will provide the consultants all relevant materials, studies, and reports required for the TA. The consultants will maintain close contact with MOI and DRBFC, as well as ADB, and will keep them informed of the TA progress and findings. To develop capacity in environmental and social aspects of road projects, MOI will appoint staff to work closely with the consultants. The consultants will procure equipment under the TA in accordance with ADB's *Procurement Guidelines* (2007, as amended from time to time). This equipment will be handed over to the EA upon completion of the TA.

18. The consultants will submit the following reports to MOI, DRBFC, and ADB: (i) inception report, 4 weeks following commencement of the services; (ii) phase I interim report, 10 weeks after commencement; (iii) phase I report, 16 weeks after commencement; (iv) phase II interim report, 4 weeks after commencing phase II; (v) draft final report, within 14 weeks of commencing phase II; and (vi) final report, 2 weeks after receiving comments from MOI and ADB. The consultants will hold a stakeholder consultation workshop at the completion of phase I, and a final workshop on completion of the draft final report to disseminate the TA's findings. A tripartite meeting involving the Government, ADB, and the consultants will be held to review the draft final report and provide guidance in its finalization.

IV. THE PRESIDENT'S DECISION

19. The President, acting under the authority delegated by the Board, has approved the provision of technical assistance not exceeding the equivalent of \$800,000 on a grant basis to the Government of Timor-Leste for preparing the Road Network Development Project, and hereby reports this action to the Board.

DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
Impact Improved and sustainable road network in Timor-Leste	By 2012 <ul style="list-style-type: none"> • Improved access to rural areas • Reduced average travel time • Lower fares 	<ul style="list-style-type: none"> • National Statistics • Traffic counts and road user surveys 	Assumptions <ul style="list-style-type: none"> • Political stability • Improved security situation • Government's continued support for roads Risk <ul style="list-style-type: none"> • Insufficient planning and implementation of road improvements, rehabilitation, and maintenance works
Outcome Project design and feasibility study agreed by the Government and Asian Development Bank (ADB)	By 2009 <ul style="list-style-type: none"> • Memorandum of understanding signed by the Government and ADB 		Assumption <ul style="list-style-type: none"> • Road infrastructure improvement remains a priority under the Government's new National Development Plan
Outputs <ol style="list-style-type: none"> 1.1 Updated status of the national, district, and rural roads network; 1.2 Assessment of the suitability of (i) a community-based rural roads development approach, (ii) labor-intensive methods for road maintenance, and (iii) using a sector-wide approach for the project; 2.1 Investment plan for improving national and district roads; 2.2 Feasibility study for the proposed project roads, including a safeguards plan and framework; 2.3 Preliminary engineering design and related bidding documents for the selected roads; 2.4 Plan for community-based development of priority rural roads; 2.5 Plan for labor-intensive maintenance of national roads; and 2.6 Plan to develop Ministry of Infrastructure's capacity 	By 2009 <ul style="list-style-type: none"> • Phase I report completed 4 months after start of consulting services and presented to Government, ADB, development partners, and other stakeholders • Draft final report for phase II submitted to Government and ADB 9 months after the start of consulting services 	<ul style="list-style-type: none"> • Consultants' reports • ADB review missions • Workshop proceedings 	Assumptions <ul style="list-style-type: none"> • Severe weather conditions will not restrict access • Security situation will not prevent road surveys Risk <p>Effective participation and support of the Government and development partners</p>

Activities with Milestones	Inputs
<p>Phase I (to be undertaken in the first 4 months of consulting services)</p> <ol style="list-style-type: none"> 1.1 Update the road sector improvement study carried out under TA3731-TIM. 1.2 Prepare a medium-term investment program for improving the national and district roads. 1.3 Identify the need for developing rural roads to link the rural communities to the road network and provide access to health, education, and other social services (including justice), and prepare a priority rural roads development plan. 1.4 Evaluate the performance of the community-based rural roads construction component under the ongoing Road Sector Improvement Project (RSIP; Grant 0017-TIM), and recommend how this approach can be replicated for developing priority rural roads. 1.5 Evaluate labor-intensive approaches under RSIP and other infrastructure projects in Timor-Leste. 1.6 Assess the road transport services. 1.7 Identify capacity development needs for Ministry of Infrastructure considering past and ongoing capacity development initiatives. 1.8 Evaluate the suitability of using a sector-wide approach for implementing the project or its components. 1.9 Phase I reports: Inception – 4 weeks after commencement of consulting services Phase I interim – 10 weeks Phase I final – 16 weeks <p>Phase II (to be undertaken within 4 months after approval of the phase I report)</p> <ol style="list-style-type: none"> 2.1 Based on the outcome of phase I, prepare: <ol style="list-style-type: none"> (i) an investment plan for improving national and districts roads, (ii) a plan for developing priority rural roads using a community-based approach, (iii) a labor-intensive road maintenance program for national roads, and (iv) a capacity development plan for the Ministry of Infrastructure. 2.2 Undertake technical and economic feasibility study of the selected roads. 2.3 Carry out environmental and social (resettlement, indigenous people, gender) assessments and prepare safeguard documentation, including initial environmental examinations, resettlement plans, indigenous peoples plans, and social and poverty assessment reports (including a summary poverty reduction and social strategy), as needed. 2.4 Complete preliminary project design, including contract packages, a procurement plan, and an implementation schedule. 2.5 Phase II reports: Inception – 4 weeks after commencement of phase II Draft final – 14 weeks Final – 2 weeks after receiving Government and ADB comments 	<ul style="list-style-type: none"> • ADB: 26 person-months of international consulting services and 25 person-months of national consulting services, costing not more than \$800,000 from Japan Special Fund • Government: \$200,000 contribution (office accommodation, and remuneration of the local counterpart staff), providing all relevant reports to the consultants as needed

ADB = Asian Development Bank, RSIP = Road Sector Improvement Project.

INITIAL POVERTY AND SOCIAL ANALYSIS

Country and Project Title:	Timor-Leste: Road Network Development Project
----------------------------	---

Lending or Financing Modality:	Grant-financed Project	Department and Division:	Pacific Department/ Pacific Operations Division
--------------------------------	------------------------	--------------------------	--

I. POVERTY ISSUES

A. Linkages to the National Poverty Reduction Strategy and Country Partnership Strategy

1. Based on the country poverty assessment, the country partnership strategy, and the sector analysis describe how the project would directly or indirectly contribute to poverty reduction and how it is linked to the poverty reduction strategy of the partner country.

Timor-Leste ranks 142 out of 177 countries in the United Nations Development Programme's (UNDP) Human Development Index (2004) and ranks lowest among ADB's developing member countries. Poverty levels are high. According to the *Timor-Leste Living Standard Measurement Survey* (2001), 40% of the population lives below the national poverty line of \$15.44 per capita income per month. In general, the incidence of poverty is higher in the western than in the eastern region, and it is higher in rural than in urban areas. Despite the improvement since 2001, initial data from the forthcoming *Timor-Leste Household Living Standard Survey* (2007)—while not yet providing estimates on the incidence of poverty—further confirm rural communities' limited access to drinking water (58.3%), basic sanitation (38.5%), and electricity (19.7%). Rural communities' average travel time (one way) to health clinics is 55 minutes, to primary schools 33 minutes, to secondary schools 63 minutes, to bus terminals or stops 52 minutes, and to police stations 60 minutes.

ADB's *Country Strategy and Program Update* for Timor-Leste (2006–2008)^a identifies transport infrastructure improvement as a core area for ADB assistance. ADB is in the process of finalizing its country partnership strategy (2009–2013). Consultations with the Ministry of Infrastructure during project preparatory technical assistance (PPTA) fact-finding confirm that the Government of Timor-Leste and ADB are committed to maintaining the focus of their partnership on improving the national roads network and extending the support to priority rural roads. Better road infrastructure will provide the rural population access to markets, education, health care, justice, and other essential services. It will also increase food security in rural areas.

The proposed RNDP's focus to improve and maintain national roads matches the Government's priorities set out in the National Development Plan (2002). The road network—from rural to national roads—is impassable at many points. Of key importance is to improve the national road network and then to sequence improvements to district and rural roads so that farmers are able to reach markets and industries to choose locations based on such non-transport factors as availability of local labor and natural resources. The key objective is to ensure connectivity between urban areas and agricultural production centers, ports, and markets. While contributing to the overarching goal of poverty reduction, improving national roads should be complemented by a long-term strategy to ensure connectivity between national, district, and rural roads, as well as by cost-effective modalities to ensure sustainable improvement and maintenance of rural roads.

B. Targeting Classification

1. Select the targeting classification of the project:

General Intervention (GI) Individual or Household (TI-H); Geographic (TI-G); Non-Income MDGs (TI-M1, M2, etc.)

2. Explain the basis for the targeting classification:

The proposed project will focus on identified priority areas for improvement and labor-intensive maintenance of national roads while working with local communities to support community-based and gender-responsive road construction and maintenance of priority rural roads.

C. Poverty Analysis

1. If the project is classified as TI-H, or if it is policy-based, what type of poverty impact analysis is needed?

not applicable

2. What resources are allocated in the project preparatory technical assistance (PPTA) and/or due diligence?

Social and community development specialists (international and national) will be engaged during PPTA to carry out the social and/or gender analysis.

3. If GI, is there any opportunity for pro-poor design (e.g., social inclusion subcomponents, cross subsidy, pro-poor governance, and pro-poor growth)?

The proposed RNDP will contribute to poverty reduction in the project area in the short-term by creating job opportunities for unskilled laborers involved in constructing national roads, labor-intensive road maintenance, and community-based road

construction and maintenance. In the long-term, enhanced national and rural road networks will promote increased access to basic social services (mostly health and education facilities at district and subdistrict level), food security, and marketability of local products. The proposed adoption of employment targets and/or quotas for women (widows and female heads of households with large number of dependents) and other vulnerable groups (veterans, other disaffected stakeholder groups, and the youth) will ensure increased benefits for the poor and socially vulnerable.

II. SOCIAL DEVELOPMENT ISSUES

A. Initial Social Analysis

Based on existing information:

1. Who are the potential primary beneficiaries of the project? How do the poor and socially excluded benefit from the project?

The project will most likely benefit local communities, passengers, operators of passenger and freight transport vehicles, vehicle owners, users of freight transport services, and entrepreneurs with small and large businesses. Rural communities will benefit from the rehabilitated national and rural road networks through enhanced access to basic social services (health and education facilities), markets, employment opportunities, and training at district and subdistrict levels. Moreover, in light of the nature of the proposed project and its emphasis on promoting labor-intensive and community-based approaches to infrastructure development, rural communities will benefit from the employment opportunities provided during road construction, labor-intensive maintenance, and community-based road construction and maintenance.

2. What are the potential needs of beneficiaries in relation to the proposed project?

Rural areas in Timor-Leste are mountainous, isolated, and inaccessible. Inadequate road infrastructure is identified as the critical factor perpetuating the poverty and vulnerability of rural communities.

3. What are the potential constraints in accessing the proposed benefits and services, and how will the project address them?

The ongoing Road Sector Improvement Project (RSIP) (2005) recognized women's and other vulnerable groups' traditional exclusion from infrastructure-related employment opportunities and their limited involvement in decision-making processes and structures related to road improvement and maintenance. The adoption of targets and/or quotas for women and other vulnerable groups will ensure their equal access to the employment opportunities provided under the project and their effective participation in any infrastructure development-related decision-making processes and structures.

B. Consultation and Participation

1. Indicate the potential initial stakeholders.

During PPTA fact-finding, an initial stakeholder analysis was carried out and relevant interest groups identified. There were consultations with the Ministry of Infrastructure (regarding national roads), nongovernment organizations (NGOs), local government and community leaders in Bobonaro District, and relevant development partners. Under the terms of reference, social development specialists will carry out consultations with identified stakeholders, which will include (but not be limited to) the Ministry of Infrastructure, RSIP's project management unit, the Ministry of Employment (on employment and labor law-related issues), local civil works contractors, and selected NGOs directly and indirectly involved in community-based infrastructure development in the project area (i.e., CARE Timor-Leste, Oxfam-Australia, and Caritas). Further discussions will be carried out with the Ministry of State Administration and Territorial Management to ensure potential synergies with the Local Governance Support Program, administered by UNDP, in selecting project sites and methodology; GTZ (regarding the Second Rural Development Program for Timor-Leste, funded by German development assistance through GTZ); Japan International Cooperation Agency (on the Rehabilitation and Maintenance of Arterial Roads Project); the International Labour Organization (Labor-Intensive Project); and the World Food Program (Food for Work Program). These talks will be to assess the scope and geographic coverage of other donors' interventions, lessons, and emerging practices relevant to the design of the proposed project.

2. What type of consultation and participation is required during the PPTA or project processing (e.g., workshops, community mobilization, involvement of nongovernment organizations and community-based organizations, etc.)?

It is anticipated that, during the PPTA, the social development specialists will conduct (i) a stakeholder consultation workshop to present the project's proposed impact and outcome, gain key stakeholders' understanding and support for the project, and receive suggestions and recommendations on project design; and (ii) field consultations. In selected districts, subdistricts, and villages, this will involve (i) key informant interviews to gain local government and community leadership's understanding, insights, and support; (ii) focus group discussions (separate for men and women participants) to assess with the help of the project team's facilitator communities' perceptions on poverty and potential road improvement, as well as their gender-specific needs, issues, and concerns; (iii) a small sample survey (of local households, vehicle operators, passengers, freight shippers, and shops) to obtain various data, including the degree of transport infrastructure usage by various shareholder groups and income levels, as well as the structure and performance of the transport services sector.

3. What level of participation is envisaged for project design?
 Information sharing Consultation Collaborative decision making Empowerment

Stakeholder consultations will enable relevant interest groups to express their views on the critical national roads identified for support under the RNDP. Field consultations in selected districts and subdistricts will enable the social and development specialists to seek the views of local communities; share information on the outcome and impact of the proposed project; document the needs, issues, and concerns raised by local communities regarding rehabilitation of the proposed national roads; and assess the communities' commitment and preparedness to be involved in community-based rural road construction and maintenance activities.

4. Will a consultation and participation plan be prepared? Yes No Please explain.

A consultation and participation (C&P) plan will be prepared and outline modalities through which stakeholder groups identified during PPTA fact-finding will be engaged in the C&P process; the anticipated breadth and depth of stakeholder engagement; how the C&P process will be linked to the summary poverty reduction and social strategy and any safeguards requirements; and how C&P modalities will be carried through the implementation arrangement of the proposed project.

C. Gender and Development

1. What are the key gender issues in the sector and/or subsector that are likely to be relevant to this project or program?

The ongoing RSIP (2005) recognized women's traditional exclusion from infrastructure-related employment opportunities as well as their limited involvement in decision-making processes and structures related to infrastructure development. The RSIP aimed to increase women's access to employment opportunities provided during road rehabilitation and maintenance. Targets and quotas for women's involvement were defined in consultation with the Office for the Promotion of Equality, the Ministry of Infrastructure, NGOs, construction companies, and local communities during a stakeholder workshop and field consultations. Based on successful implementation of the RSIP (where targets and quotas for women's participation were fulfilled or exceeded), the proposed RNDP will be designed to further advance gender equality and women's empowerment by ensuring women's access and their involvement in all employment and training opportunities under the project. The PPTA consultants will develop a social action plan. Most specifically, the consultants will assess the feasibility of (i) applying a reasonable quota for women's involvement in the construction and maintenance of national roads (as opposed to the target approach), directed toward unemployed widows, female heads of households with large numbers of dependents, and other vulnerable groups; (ii) applying a 100% quota for women's involvement in bioengineering (as opposed to 75% in RSIP); and (iii) applying a 60% quota for women's involvement in community-based road construction and maintenance.

2. Does the proposed project or program have the potential to promote gender equality and/or women's empowerment by improving women's access to and use of opportunities, services, resources, assets, and participation in decision making?
 Yes No Please explain.

3. Could the proposed project have an adverse impact on women and/or girls or widen gender inequality?
 Yes No Please explain.

III. SOCIAL SAFEGUARD ISSUES AND OTHER SOCIAL RISKS			
Issue	Nature of Social Issue	Significant/Limited/ No Impact/Not Known	Plan or Other Action Required
Involuntary Resettlement	Initial assessment during fact-finding indicates small involuntary resettlement impacts. The PPTA includes detailed investigation to identify such impacts and proposes appropriate mitigation measures based on ADB policies.	Not significant	<input type="checkbox"/> Full Plan <input checked="" type="checkbox"/> Short Plan <input checked="" type="checkbox"/> Resettlement Framework <input type="checkbox"/> No Action <input type="checkbox"/> Uncertain
Indigenous Peoples	Initial assessment during fact-finding indicates no issues involving indigenous people are expected.	Not significant	<input type="checkbox"/> Plan <input type="checkbox"/> Other Action <input type="checkbox"/> Indigenous Peoples Framework <input checked="" type="checkbox"/> No Action <input type="checkbox"/> Uncertain

Issue	Nature of Social Issue	Significant/Limited/ No Impact/Not Known	Plan or Other Action Required
Labor <input checked="" type="checkbox"/> Employment Opportunities <input type="checkbox"/> Labor Retrenchment <input checked="" type="checkbox"/> Core Labor Standards	The project will create job and job-related training opportunities for laborers involved in improving national roads, labor-intensive road maintenance, and community-based rural road development and maintenance.	Not significant	<input type="checkbox"/> Plan <input checked="" type="checkbox"/> Other Action <input type="checkbox"/> No Action <input type="checkbox"/> Uncertain
Affordability	No affordability issues are expected, as no road user fees or tax will be incurred by beneficiaries.	Not significant	<input type="checkbox"/> Action <input checked="" type="checkbox"/> No Action <input type="checkbox"/> Uncertain
Other Risks and/or Vulnerabilities <input checked="" type="checkbox"/> HIV/AIDS <input checked="" type="checkbox"/> Human Trafficking <input type="checkbox"/> Others (conflict, political instability, etc.)	Other social and health risks (i.e., sexually transmitted infections, HIV/AIDS, human trafficking, and road safety) will be assessed.	Significant	<input checked="" type="checkbox"/> Plan <input type="checkbox"/> Other Action <input type="checkbox"/> No Action <input type="checkbox"/> Uncertain
IV. PPTA OR DUE DILIGENCE RESOURCE REQUIREMENT			
<p>1. Do the terms of reference for the PPTA (or other due diligence) include poverty, social and gender analysis and the relevant specialist(s)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, please explain why.</p> <p>2. Are resources (consultants, survey budget, and workshop) allocated for conducting poverty, social and/or gender analysis, and consultation and participation during the PPTA or due diligence? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, please explain why.</p>			

ADB = Asian Development Bank, HIV/AIDS = human immunodeficiency virus/acquired immunodeficiency syndrome, PPTA = project preparatory technical assistance, RNDP = Road Network Development Project, RSIP = Road Sector Improvement Project.

^a ADB. 2005. *Timor-Leste Country Strategy and Program Update, 2006-2008*. Manila.

COST ESTIMATE AND FINANCING PLAN
(\$'000)

Item	Total Cost
A. Asian Development Bank Financing^a	
1. Consultants	
a. Remuneration and Per Diem	
i. International Consultants	520.0
ii. National Consultants	50.0
b. International and Local Travel	70.0
c. Reports and Communications	11.0
2. Equipment ^b	20.0
3. Workshops	5.0
4. Surveys, ^c Miscellaneous Administration and Support Costs	30.0
5. Representative for Contract Negotiations	8.0
6. Contingencies	86.0
Subtotal (A)	800.0
B. Government Financing	
1. Office	120.0
2. Remuneration and Per Diem of Counterpart Staff	80.0
Subtotal (B)	200.0
Total	1,000.0

^a Financed by the Japan Special Fund, funded by the Government of Japan.

^b Including computers, printers, and copier.

^c Includes road inventory and condition, engineering, poverty and social, as well as environmental surveys.

Source: Asian Development Bank estimates.

OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

A. General

1. The consultants will undertake the work in two phases. The first phase will update the study completed under the technical assistance (TA) for Transport Sector Improvement.¹ Based on the phase I findings and the stakeholder consultation workshop, the consultants will prepare the proposed project for Asian Development Bank (ADB) financing in phase II. The TA will require about 26 person-months of international and 25 person-months of national consulting services. The team leader will have overall responsibility for implementing the TA and managing the team. The transport economist/planner or road engineer could function as team leader. The team leader must also have expertise in transport policy, institutional assessment, and capacity building. The terms of reference for the consultants include but are not limited to the following:

B. Scope of Consulting Services

1. Phase I – Update and Assessment

2. Update the earlier ADB study on road sector improvement to identify the improvement needs of national and district roads and outline a strategy for implementation. Based on this, prepare a medium-term road investment program. The key activities are to

- (i) undertake engineering studies to update the road inventories and condition surveys,
- (ii) develop appropriate road rehabilitation and improvement strategies² and identify road sections where these are applicable,
- (iii) prepare cost estimates and implementation schedules,
- (iv) prepare a medium-term investment program for rehabilitation and improvement of the national and district roads, and
- (v) identify the road maintenance needs and prepare a program for maintenance of national roads.

3. In conjunction with the above, identify the need for development of rural roads to link the rural communities that presently do not have access. This will involve

- (i) reviewing the Government's plans to provide access to the rural areas;
- (ii) coordinating with the relevant government agencies responsible for provision of health, education, justice, and other social services to the rural communities;
- (iii) developing suitable criteria for selecting communities that require access; and
- (iv) identifying the rural road development needs and preparing a nationwide priority rural roads development plan.

4. Evaluate the performance of the community participated rural roads development component under the ADB-financed Road Sector Improvement Project (RSIP)³ and similar community participated rural infrastructure projects financed by the Government and other development partners. Recommend how such approaches can be replicated or expanded for a nationwide priority rural roads development plan under the proposed project. This will include reviewing the existing nongovernment organizations, civil societies, and other agencies with expertise and interest in community-based road construction and maintenance and assessing their capacity to expand the pilot RSIP model to other areas of the country.

¹ Under ADB. 2001. *Technical Assistance to the Democratic Republic of Timor-Leste for Transport Sector Improvement*. Manila (TA 3731-TIM). The work was carried out during 2005 and the final report published in 2006.

² This will include recommendations to address the issue of fragile geological conditions resulting in frequent landslides and other soil-related issues that continue to affect the road network.

³ ADB. 2005. *Grant Assistance to the Democratic Republic of Timor-Leste for Road Sector Improvement*. Manila (Grant 0017-TIM, approved on 27 September).

5. Evaluate labor-based and labor-intensive approaches used for road infrastructure development and maintenance on completed and ongoing projects in Timor-Leste and assess the viability of using these for the proposed project.
6. Assess the existing public transport system for both passengers and freight, review the relevant regulatory laws and codes that govern public transport, identify issues, and prepare recommendations for approval of the Government.
7. Review the ongoing capacity development activities in the road sector and identify additional capacity development needs based on the intended roles and responsibilities of the Directorate of Roads, Bridges and Flood Control (DRBFC); the Ministry of Infrastructure (MOI); and other road-related agencies at the district levels.
8. Assess the feasibility of using sector-wide approaches for the proposed project or its components.

2. Phase II – Project Preparation

9. Based on the outcome of phase I, the consultants will prepare a proposed project for ADB financing comprised of
 - (i) preliminary design and feasibility study of selected national and district roads,
 - (ii) community-based priority rural roads development plan,
 - (iii) labor-intensive road maintenance program, and
 - (iv) institutional and capacity development plan.
10. The major tasks for preparation of the proposed project by the international and national team member are as follow:

3. Engineering Study (Road Engineers; Geotechnical/Material Engineers) (8 person-months international, 8 person-months national; 2 person-months international, 4 person-months national)

- (i) Review available engineering data and study on the project roads. Survey conditions of the roads and evaluate the pavement strength.
- (ii) Review existing traffic data; carry out necessary traffic counts, origin–destination and axle load surveys; and forecast traffic for each road section.
- (iii) Survey typical slope stability problems on the road network, analyze their causes, and develop recommendations for mitigating them.
- (iv) Propose a required level of improvement for each road section, and estimate the required costs of civil works, including foreign exchange and local components, while separately identifying taxes and customs duties.
- (v) Prepare a summary of the technical approach and design standard, taking into account environment-friendly approaches and, where appropriate, community-based methods.
- (vi) Propose appropriate contract packages, indicating for each package the most suitable procurement method, and prepare draft standard bidding documents.
- (vii) Prepare a project implementation schedule.
- (viii) Prepare draft bidding documents for an initial program of works, to be procured by advance procurement and implemented immediately upon loan and/or grant effectiveness.

- (ix) Develop draft terms of reference for consultants for detailed engineering design and construction supervision, and estimate the required resources (person-months and costs).
- (x) Identify the policy and institutional reforms needed to improve road sector performance.
- (xi) Identify MOI's and DRBFC's capacity development needs and prepare implementation plans.

4. Economic Analysis (Transport Economist/Planner)

(8 person-months international)

- (i) Review available data and economic analysis of the project roads. Obtain the most recent available data on traffic, road condition, required improvements, and estimated civil works and maintenance.
- (ii) Determine financial and economic operating costs for representative vehicle types.
- (iii) Prepare economic evaluation of the proposed road improvements following ADB's *Guidelines for the Economic Analysis of Projects*.
- (iv) Develop optimum road improvement strategies using Highway Development and Management-Model 4 for each road section based on an unconstrained budget.
- (v) Carry out program optimization, considering likely budget constraints in developing a recommended program of works to be implemented under the proposed project, including least-cost options, economic rates of return, and priority rankings.
- (vi) Undertake switching value calculations and sensitivity analysis for variations in key parameters and budget constraints. Undertake risk analysis following ADB's *Handbook for Integrating Risk Analysis in the Economic Analysis of Projects*.
- (vii) Analyze how limited access to transportation services contributes to poverty in the project area of influence.
- (viii) Estimate elasticities (for agricultural inputs and outputs, for passengers and freight transport) as a result of road rehabilitation effects, and assess who will most likely be the ultimate recipients of project net benefits.
- (ix) Based on the economic analysis, estimate the expected distribution of project net benefits among freight transport users, passenger transport users, vehicle owners, labor, the Government, and the economy in general.
- (x) Develop a draft project design and monitoring framework. Develop the baseline indicators for monitoring the impact, outcomes and outputs.

5. Road Transport Services (Road Transport Services Specialists)

(1 person-month international, 1 person-month national)

- (i) Review and analyze the structure, operations, and management practices of the road transport in Timor-Leste, focusing in particular on types of ownership, size of operator, vehicle fleet characteristics, areas served (routes), vehicle utilization, and other operational performance indicators. Prepare recommendations for improving the quality of transport services.
- (ii) Review the current policy and regulatory framework regarding licensing of operators, vehicles, routes, and fare setting, then recommend changes needed to encourage operators and improve road transport services in rural areas.
- (iii) Evaluate the present system of establishing road transport tariffs and identify improvements for rural areas. This will include assessing how to offset operating losses in remote areas from profitable long routes and urban operations.
- (iv) Review the vehicle inspection needs and prepare recommendations for safety of passengers and vehicles.

- (v) Review the role of district administrations in rural areas, including the methods used to consult and/or determine public needs, and suggest improvements.
- (vi) Assess the demand for transport services by 2015, and prepare recommendations for extending road transport services.
- (vii) Review the operations of transport terminals and prepare recommendations for improvements.

6. Labor-Based Methods (Labor-Based Construction Specialist)

(2 person-months international, 2 person-months national)

- (i) Evaluate labor-based and labor-intensive approaches used for road infrastructure development and maintenance in Timor-Leste and in other countries.
- (ii) Assess the viability of using these for the road infrastructure works under the proposed project.
- (iii) Based on the outcome of the above, prepare detailed work plan for the proposed project.

7A. Social and Consultation and Participation Analysis (Social Development Specialists) (3 person-months international, 6 person-months national)

- (i) With participation of all stakeholders, identify all groups at risk with respect to the project, and analyze the reasons for their vulnerability, including their exposure to risks, as described in ADB's *Handbook on Social Analysis* (2007).
- (ii) Collect relevant quantitative and qualitative data, including to design and/or conduct any necessary socioeconomic surveys, using household questionnaires and participatory approaches.
- (iii) From the collected data and surveys, determine (a) the adverse social costs of the project, (b) options to avoid poverty-inducing components, and (c) options proactively to contribute to poverty reduction.
- (iv) Conduct social and/or gender impact assessments of the project in accordance with ADB's *Handbook on Social Analysis* (2007) by collecting relevant quantitative data and carrying out extensive consultations through a stakeholder consultation workshop to assess the practicality of specific modalities to increase community participation (with a focus on women and vulnerable groups) in project implementation.
- (v) Identify any other potential social and/or health risks associated with the project (emphasizing sexually transmitted infections, HIV/AIDS and human trafficking), and include any mitigation activities in the project-specific social action plan.
- (vi) Propose measures to ensure that the project complies with national labor laws (e.g., minimum wage, equal pay, safe working conditions) and international core labor standards and includes their monitoring in the social action plan.
- (vii) Consult with relevant government and development partners to assess the scope and geographic coverage of their interventions, lessons learned, and emerging practices relevant to the design of RSIP phase II.⁴
- (viii) Based on the pilot-tested approach for community-based rural road construction and maintenance under RSIP, develop a detailed program for developing priority rural roads nationwide. This will include (a) selecting additional crews, and (b) scaling up the pilot-tested approach in additional communities in the proposed project districts.

⁴ These include the Ministry of State Administration and Territorial Management, GTZ, Japan International Cooperation Agency, the International Labour Organization, and the World Food Program. See details on page 2 of the Initial Poverty and Social Analysis that is Appendix 3 to this Technical Assistance Report.

- (ix) Prepare a summary poverty reduction and social strategy report in the prescribed format.
- (x) Develop a project-specific social action plan, with targets and indicators, which will be incorporated into the project design and monitoring framework and the project performance monitoring system.

7B. Social Safeguards (Resettlement and Indigenous People)

- (i) Assess government laws and regulations on resettlement and compensation, as well as government staff capacity and training needs for implementing social safeguard plans and an accompanying framework for the project.
- (ii) Prepare resettlement plans and a framework for project roads and any associated facilities to comply with ADB's guidelines on involuntary resettlement and its *Handbook on Resettlement: A Guide to Good Practice* (1998).
- (iii) Prepare an overview of ethnic population characteristics in each road's zone of influence for both mainstream and minority groups. Identify the likely project impact on indigenous people or ethnic groups in the zone of influence and propose mitigation measures.
- (iv) If necessary, prepare an ethnic minority development plan and framework for project roads and any associated facilities to comply with ADB's *Policy on Indigenous Peoples* (1998).

8. Environmental Assessment (Environmental Specialists)

(2 person-months international, 4 person-months national)

- (i) Gather and review all available environmental studies and secondary data on the physical and biological environment, ecological resources, and quality-of-life values, then undertake a field survey and/or study to fill information gaps.
- (ii) Assess the environmental impacts of each road, considering the direct, indirect, and cumulative impacts; develop specific mitigation measures, including bioengineering methods, to minimize erosion and landslides at selected sites along the road alignment.
- (iii) Undertake consultations with the affected people and other stakeholders in the project area; present the record of public consultations in the environmental assessment report, indicating stakeholders consulted, issues discussed, and recommendations.
- (iv) Prepare an initial environmental examination (or, an environmental impact assessment, if warranted) and its summary for each road in accordance with ADB guidelines and the Government's environmental assessment requirements. Prepare an environmental management and monitoring plan including cost estimates and institutional responsibilities for undertaking the plan.
- (v) Draft an environmental covenant necessary for proper implementation of environmental management for the road project.
- (vi) Assess past and present climatic data (particularly rainfall). Based on this, assess the likelihood of extreme weather events and incorporate climate change adaptation into the project design (particularly for roadside drainage), including its incremental costs.
- (vii) Assess DRBFC's capacity to implement the environmental management and monitoring plan, and recommend necessary training or other activities to strengthen DRBFC's capacity for dealing with environmental problems related to road sector development in general.