

Technical Assistance

TAR: OTH 36353

Technical Assistance for Preparing the Greater Mekong Subregion Southern Coastal Corridor Project (Financed by the Japan Special Fund)

March 2005

Asian Development Bank

ABBREVIATIONS

EIRR	–	economic internal rate of return
GDPW	–	General Department of Public Works
GMS	–	Greater Mekong Subregion
HIV/AIDS	–	human immunodeficiency virus/acquired immunodeficiency syndrome
MOT	–	Ministry of Transport
MPWT	–	Ministry of Public Works and Transport
PMU-MT	–	My Thuan project management unit
TA	–	technical assistance

TECHNICAL ASSISTANCE CLASSIFICATION

Targeting Classification	–	General intervention
Sector	–	Transportation and communication
Subsector	–	Roads and highways
Themes	–	Sustainable economic growth Regional cooperation
Subtheme	–	Fostering physical infrastructure development

NOTE

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

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I. INTRODUCTION

1. The proposed regional technical assistance will undertake a feasibility study covering economic, technical, environmental, and social issues, to complete the Southern Coastal Corridor (the Corridor) linking Thailand, Cambodia, and Viet Nam. The Corridor is part of the Southern Economic Corridor flagship program—1 of 11 flagship programs of the 10-year Greater Mekong Subregion (GMS) Strategic Framework, which was endorsed by the GMS Summit of Leaders in Phnom Penh in November 2002. This TA was included in the 2004-2008 Regional Cooperation Strategy and Program for the GMS.¹ A mission visited Cambodia and Viet Nam during 18-29 October 2004 and held discussions with their governments on the proposed TA. Agreement was reached on the goals, purpose, scope, implementation arrangements, cost, financing arrangements, and terms of reference for the TA.² A design and monitoring framework for the TA is in Appendix 1.³

II. ISSUES

2. The Fifth Ministerial Conference on Subregional Cooperation, held in Manila in November 1995, adopted the Summary of the Second Meeting of the Subregional Transport Forum, including a recommendation to study the southern coastal road corridor linking Thailand, Cambodia, and Viet Nam. In response to a request from the Cambodian delegation, a regional TA⁴ was prepared for approval in 1996, but implementation was suspended due to political unrest in Cambodia, and the approval lapsed.

3. At the Sixth Meeting of the Subregional Transport Forum held in Vientiane, Lao People's Democratic Republic, in May 2001, the Vietnamese delegation requested the Asian Development Bank (ADB) consider funding the rehabilitation of highways 63 and 80 as part of the Southern Coastal Corridor Project. As a result, the project was reinstated to the TA program. However, during the Country Programming Mission to Cambodia in April 2003, the Government advised ADB that other external funding agencies had taken up most sections of the proposed project within Cambodia and no significant funding was required. To determine what was required to complete the Corridor, a small-scale TA⁵ was approved in 2003. It focused on the Viet Nam portion of the Corridor from Ha Tien to Nam Can but reviewed the status of the Corridor as a whole. The final report from the TA presented a preliminary analysis of the Vietnamese portion of the Corridor, indicating that there was a viable project to upgrade it. The report recommended that a more detailed study confirm the TA's conclusions. The final report also noted that the final 17-kilometer section of road connecting to the Cambodia–Viet Nam border required upgrading to complete the Cambodian section of the Corridor, that the Cambodia–Viet Nam border crossing needed to be upgraded to an international crossing, and that facilities to support this border crossing should be provided.

4. While Cambodia and Viet Nam have not traded much along the Corridor, empirical observations of activities at the existing border show that future trade has considerable potential.

¹ The TA first appeared in the *ADB Business Opportunities* (Internet edition) on 28 October 2004.

² Memorandums of agreement were signed by the governments of Cambodia and Viet Nam, indicating that they had no objection to the TA.

³ A draft of this paper was circulated for interdepartmental comments on 10 December 2004.

⁴ ADB. 1996. *Technical Assistance for the Thailand-Cambodia-Viet Nam Southern Coastal Road Corridor*. Manila (TA 5691-REG).

⁵ ADB. 2003. *Technical Assistance for the Southern Coastal Corridor*. Manila (TA 6134-REG).

Given a good road network in Ca Mau and Kien Giang provinces in Viet Nam, and the opening of the border at Xa Xia in Viet Nam and Lork in Cambodia, international trade could be significant. The final report from the small-scale TA (footnote 5) notes that this trade would initially be between Viet Nam and Cambodia, but that linkages between Thailand and Viet Nam would develop once trade routes and markets were established. In Cambodia, the southern coastal region is an emerging industrial zone centered on the international seaport in Sihanoukville. Developments in this zone will take advantage of planned exploitation of natural gas resources in the Gulf of Siam, tight subregional transport links to the established industrial zones in the Eastern Seaboard in Thailand, and the rapidly developing agro- and aqua-based industries in southern Viet Nam. In Viet Nam, these industries are rapidly being promoted to export processed food products as significant foreign exchange earners. These products, especially those based on fish and fish produce, must be quickly processed and frozen. Inland transport of such products is almost always by truck with refrigerated units, rather than inland waterways, which are not as fast and increase losses. An industrial estate is proposed near Ca Mau City, where urea fertilizer and other goods requiring either natural gas or electrical power would be produced at combined low labor cost. Other items coming from Viet Nam that could use the Corridor include fertilizers, processed foods, and other consumer goods.

5. In Viet Nam, funding of road maintenance and capacity building for road maintenance planning and implementation are being addressed under ADB's Third Road Improvement Project and the World Bank's Road Network Improvement Project. In Cambodia, a national strategy is being prepared and will be taken up under the proposed transport infrastructure development and maintenance project to be prepared in 2005.

III. THE TECHNICAL ASSISTANCE

A. Purpose and Output

6. The impact of the Project is to improve access and connectivity, nationally and subregionally, along the Cambodian and Vietnamese sections of the Corridor. The outcome of this TA is a project design and feasibility study agreed to by the governments and the ADB that sets out an economically, technically, socially, and environmental feasible project to rehabilitate and upgrade transport links and facilities along the Corridor. The project directly supports ADB's *GMS Regional Cooperation Strategy and Program's*⁶ strategic thrust of enhancing connectivity and facilitating cross-border transport among Thailand, Cambodia, and Viet Nam, thereby fostering economic and social integration and supporting increased trade and investment in the Southern Economic Corridor.

7. The TA outputs will include the following: (i) analyses of transport links and determination of the economic, technical, social, and environmental feasibility for (a) each component, (b) components within each country, and (c) the project as a whole; (ii) a matrix ranking components and options for combinations of components to form logical projects for a range of funding levels; (iii) determination of facilities required at the Cambodian–Viet Nam border on the project road; and (iv) a multimodal study on the movement of goods and people within the project-influenced area.

⁶ ADB. 2004. *GMS Regional Cooperation Strategy and Program 2004–2008*. Manila.

B. Methodology and Key Activities

8. The starting point for the study will be the final report from the small-scale TA (footnote 5). This final report established the project's viability based on a preliminary analysis that focused on the Vietnamese portion of the Corridor. This regional TA will initially consider the Cambodian and Vietnamese sections of the project separately, and the whole project from a subregional perspective. For the Cambodian portion, the objective will be to establish the means to connect Route Nationale 33 with the Lork border crossing to Viet Nam. The TA will identify alternative routes; analyze these alternatives for technical, economic, social, and environmental feasibility; and recommend the optimum alignment and standard of construction.

9. The final report for the small-scale TA noted that for the Vietnamese portion of the project, the movement of goods and people within a multimodal framework should be understood more. In particular, significant volumes of goods are moved along the extensive network of inland waterways within the project-influenced area, and the transfer of goods from inland waterways to upgraded roads may have a significant impact on the project. The final report for the small-scale TA noted that because the existing road network between Rach Gia, in Kien Giang Province, and Ca Mau, in Ca Mau Province, is only accessible to light trucks, then any trade between the two provinces may be conducted via Can Tho to the northeast on the Mekong River. The multimodal study of the movement of goods and people will (i) identify the origin and destination of movements, (ii) identify tariff structures, (iii) determine volumes of goods and numbers of passengers, and (iv) determine the characteristics of goods and purposes of journeys and estimate transfers to project roads. The study results will be used to analyze road options between Rach Gia and Ca Mau.

10. From Xa Xia to Rach Gia, the alignment of the project road is clear. However, from Rach Gia to Ca Mau there are alternative routes, of which only one was considered under the small-scale TA. Therefore, this regional TA will determine alternatives for this section of the Corridor and determine upgrading levels that are technically, economically, socially, and environmentally feasible. These results will then be gathered into a matrix format to determine viable improvement levels for each link for a range of funding options. The matrix will allow identification of optimum improvement packages for the project's Vietnamese section within budget constraints.

11. Based on the results of the work on the Cambodian and Vietnamese sections, the project as a whole will be analyzed to determine (i) its economic viability, as compared to the separate national components; and (ii) the distribution of benefits between Cambodia and Viet Nam.

12. The project's environmental impacts will be generally minor, as the work will principally consist of rehabilitating and widening roads. However, several protected and sensitive areas are close to some road sections. To ensure that environmental impacts on these areas are fully identified and appropriate mitigation measures designed, the TA includes preparation of environmental impact assessments for the project's Cambodia and Viet Nam sections.

13. The project's initial poverty and social assessment (Appendix 2) notes that significant numbers of the Khmer minority live in the Vietnamese project area. Preliminary surveys suggest that no ethnic minorities live in the Cambodian project area, but this is to be confirmed. The TA will determine if a project component will significantly benefit or harm an ethnic minority community. If so, then an ethnic minority development plan or framework will be developed. Improving roads will require acquisition of land and resettlement of project-affected people. Initial assessments indicate that resettlement impacts will be significant in the Cambodian and

Vietnamese project areas. Therefore, the TA will prepare full resettlement plans in accordance with ADB policies and guidelines.

14. As the project will support a regional transport corridor, risks include transmission of HIV/AIDs,⁷ and human trafficking. These will be mitigated by developing awareness campaigns for project area communities and for temporary communities around construction camps. These campaigns will take account of ongoing programs and initiatives in the project area.

15. The TA will study facilities at the Lork–Xa Xia border crossing and determine what it needs to operate as an international crossing under the GMS Agreement on Facilitation of Cross-Border Transport of Goods and People. During the December 2004 tripartite meeting for the initial implementation of the GMS cross-border transport agreement for the Bavet-Moc Bai border crossing points, the Cambodian and Vietnamese delegations agreed to include Lork–Xa Xia in the list of protocol-1 border-crossing points by executing a Memorandum of Understanding, as called for in protocol 1 of the agreement.

16. The project area is heavily contaminated by unexploded ordinance. The TA includes surveying the extent of contamination and to determine the extent of clearance requirements for civil works.

17. Potential project risks include the following: (i) the Lork–Xa Xia border crossing might not be upgraded to an international crossing, (ii) low-capacity ferries and bridges on road links between Rach Gia and Ca Mau might not be upgraded, and (iii) other sections of the Corridor in Cambodia might not be completed on time. The TA will assess each risk and develop mitigation measures or strategies.

C. Cost and Financing

18. The total cost of the TA is estimated at \$1.22 million equivalent. ADB will finance \$1 million equivalent; the TA will be financed on a grant basis by the Japan Special Fund, funded by the Government of Japan. The remaining \$220,000 equivalent will be financed by the governments of Cambodia and Viet Nam through in-kind contributions of the executing agency and provincial counterpart staff; office space, transport, and local communications for the counterpart staff; and maps, reports, and other information. Detailed cost estimates are in Appendix 3. Both governments have been informed that TA approval does not commit ADB to finance any ensuing project.

D. Implementation Arrangements

19. In Cambodia the Executing Agency will be the Ministry of Public Works and Transport (MPWT), which has designated the General Department of Public Works (GDPW) as the Implementing Agency. The director general, GDPW, will have overall responsibility for the department's contribution to the TA. In Viet Nam, the Executing Agency will be the Ministry of Transport (MOT), which has designated My Thuan project management unit (PMU-MT) as the Implementing Agency. The general director of PMU-MT will have overall responsibility for the unit's contribution to the TA. GDPW and PMU-MT will each set up a subunit staffed with counterpart personnel for day-to-day coordination. These personnel will work with the TA

⁷ Human immunodeficiency virus/acquired immunodeficiency syndrome.

consultant's personnel as well as other government agencies, particularly provincial departments of transport, nongovernment organizations (NGOs), and other interested parties.

20. To oversee TA implementation, MPWT and MOT will establish a steering committee comprising representatives from their countries' other ministries, provincial governments, and other government agencies. The committee will meet regularly, alternating between Phnom Penh and Ho Chi Minh. Depending on where they are held, meetings will be chaired by a senior official of either MPWT or MOT.

21. The TA will require about 163 person-months of consulting services, including about 24 of international and 139 of domestic consultants. The TA will be implemented over 10 months, from September 2005. Outline terms of reference are in Appendix 4. Reporting requirements include the submission of inception, interim, draft final, and final reports, and brief monthly progress reports. Tripartite meetings will be held after the submission of the inception, interim, and draft final reports. The meetings will alternate between Phnom Penh and Ho Chi Minh. Two workshops will be held after submission of the draft final report to present the project to the governments, NGOs, and other stakeholders. One workshop will be held in Phnom Penh and focus on the Cambodian project components, and the other will be held in Ho Chi Minh and focus on the Vietnamese components. The international consultants will have expertise in transport planning and economics, highway design and maintenance, bridge maintenance, ferry operations, environmental impact assessment, resettlement, social issues, and institutional development. The consultants will be engaged by ADB in accordance with its *Guidelines on the Use of Consultants* and other arrangements satisfactory to ADB for the engagement of domestic consultants. Consultants will be recruited using quality- and cost-based selection procedures; simplified technical proposals will be requested. TA-financed equipment will be procured in accordance with ADB's *Guidelines for Procurement*. On TA completion, the equipment will be handed over to the implementing agencies.

IV. THE PRESIDENT'S DECISION

22. The President, acting under the authority delegated by the Board, has approved the provision of technical assistance not exceeding the equivalent of \$1,000,000 on a grant basis for preparing the Greater Mekong Subregion Southern Coastal Corridor 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
<p>Impact Improve national and subregional access and connectivity along the Cambodian and Vietnamese sections of the Greater Mekong Subregion Southern Coastal Corridor (the Corridor)</p>	<p>Quantity of goods moving along the project roads increases at 5% a year in both directions</p> <p>Share of cargo carried on large trucks is no less than 10% 5 years after project completion</p> <p>Within 2 years of completion of improvement works, bus fares are reduced by an average of 10%, and freight rates, by 20%, in real terms</p>	<p>Provincial and national trade statistics</p> <p>Customs reports</p> <p>Traffic surveys</p> <p>Survey of tariffs for transport of goods and people</p> <p>Survey of weight restrictions on bridges and ferries</p>	<p>Assumptions</p> <ul style="list-style-type: none"> • The GMS Agreement on Facilitation of Cross-Border Transport of Goods and People is finalized and implemented. • Trade relations between Cambodia and Viet Nam are stable. • The border is declared an international border. <p>Risks</p> <ul style="list-style-type: none"> • Not all weight-limited links are removed. • Other sections of the Corridor in Cambodia are not completed on time.
<p>Outcome Project design and feasibility study agreed by governments and ADB that sets out an economically, technically, socially, and environmental feasible project to rehabilitate and upgrade transport links and facilities along the Corridor</p>	<p>Memorandums of understanding signed by governments and ADB during appraisal mission by 10 months after commencement of services.</p>	<p>Memorandums of Understanding</p>	<p>Assumptions</p> <ul style="list-style-type: none"> • That the priorities of both governments remain the same. • That neither government seeks other sources of funding

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
<p>Outputs</p> <p>1. Technical assessments completed including the following:</p> <ul style="list-style-type: none"> (i) determination of the economic, technical, social, and environmental feasibility of Project; (ii) a matrix ranking components and options for combinations of components to form logical projects for a range of funding levels; (iii) determination of facilities required at the Cambodian–Viet Nam border on the project road; and (iv) a multimodal study on the movement of goods and people within the project-influenced area. 	<p>Draft final report submitted to governments and ADB by end of eight month after commencement of services</p>	<p>Receipt of report by ADB</p> <p>Receipt of report by Governments</p>	<p>Risks</p> <ul style="list-style-type: none"> • Restricted availability and access to information and government personnel. • Restricted access to project sites
<p>Activities with Milestones</p> <p>1. Analyze transport links and determine economic, technical, social, and environmental feasibility for (i) each component, (ii) components within each country, and (iii) the project as a whole (8 months after commencement of services).</p> <ul style="list-style-type: none"> a) Evaluate the economic growth potential of the project area on the basis of existing and planned investment projects. Estimate existing and forecast transport demand and expected trade flows; b) Prepare preliminary designs, construction quantities, and overall construction costs for each sample subproject road section for each improvement option; c) Assess the economic internal rate of return by homogenous road section. Project will be analyzed as a whole, as compared to the separate national components, and distribution of benefits between Cambodia and Viet Nam; d) Prepare environmental impact assessments for the Cambodia and Viet Nam sections, including environmental mitigation measures; e) Prepare a full resettlement plan for the project components within each province along the project road; f) If ethnic minorities are significantly affected, develop a time-bound ethnic minority development plan; g) Prepare a HIV/AIDs transmission and human trafficking awareness 			<p>Inputs</p> <ul style="list-style-type: none"> • ADB: \$1,000,000 • Government of Cambodia: \$20,000 • Government of Viet Nam: \$2000,000

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
<p>campaigns for communities in the project area and for temporary communities around construction camps;</p> <p>h) Assess the capacity of central and provincial institutions to plan, manage, implement, finance, and monitor land acquisition, compensation, and resettlement. Identify capacity-building measures to be included in the project;</p> <p>i) Assess the capacity of central and provincial institutions for environmental impact assessment and environmental management. Prepare a training needs assessment and recommend improvements to institutional arrangements;</p> <p>j) For the Vietnamese portion of the project, prepare pre-feasibility and feasibility reports and a project bidding plan for submission to the Government.</p> <p>2 Prepare matrix ranking components and options for combinations of components to form logical projects for a range of funding levels (8 months after commencement of services).</p> <p>3. Determine facilities required at the Cambodian–Viet Nam border on the project road (8 months after commencement of services).</p> <p>4. Undertake a multimodal study on the movement of goods and people within the project-influenced area (8 months after commencement of services).</p>			

INITIAL POVERTY AND SOCIAL ANALYSIS

A. Linkages to the Country Poverty Analysis

Is the sector identified as a national priority in country poverty analysis?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the sector identified as a national priority in country poverty partnership agreement?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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Contribution of the sector or subsector to reduce poverty in Cambodia and Viet Nam

Cambodia.¹ Poverty is overwhelmingly rural, from a low of 10-15% in Phnom Penh to 40-45% in the rural areas, reaching 60% in some provinces in the Tonle Sap Basin. Around 35-40% of the population has expenditure levels below the income poverty line; 15-20% live in extreme poverty. Despite robust growth over the past decade, official figures indicate that poverty has declined only modestly from 39% in 1994 to 36% in 1999.

One cause of poverty is the lack of efficient access to markets. Transport is predominately by road, but most of the road network, especially at the lower end and affecting rural and agriculture communities, is in poor condition. This has led to high transport costs and restricted the access of the poor to markets and social services, adversely affecting competitiveness, expansion of economic opportunities, rural livelihoods, and poverty reduction. Although notable progress has been made since the early 1990s in restoring a core road network that interconnects the main centers in Cambodia, and the national economy with neighboring countries, much remains to be done. Improved access is a cornerstone of the Government's strategy as it helps reduce costs of farm inputs, increases prices paid to farmers, and opens up nonfarm income-earning opportunities.

Viet Nam. Viet Nam's impressive economic growth during the 1990s and early 2000s has been strongly pro-poor. With only marginal increases in inequality, the proportion of people living below the total poverty line has dropped from 58% in 1993 to 32% in 2002. The proportion living below the food poverty line also declined from 25% to about 13%, indicating that even the poorest have benefited from economic growth. However, poverty is still high and remains a rural phenomenon, with about 45% of the rural population living in poverty. Nearly all provinces have strikingly high rural poverty, suggesting that geographical and remoteness and disconnection from the rest of the economy are among the key factors in the spatial distribution of poverty.

Connectivity is a key factor for enabling the poor to respond to market incentives and to participate in economic growth. Remoteness and disconnection are the key reasons for ethnic minorities' inability to benefit from economic development. They are unable to develop existing skills and resources, and cannot improve on low returns to capital. Improved transport infrastructure will contribute to regionally balanced and equitable economic growth by stimulating agricultural production, and increase access to jobs and to social services such as schools and extension services. The opening of international borders and encouragement of cross-border trade will stimulate rural economic development, reflecting international market demand for local goods such as fruits and vegetables as well as economic inputs such as fertilizer and construction materials, among others. Tourism promises to create service sector jobs.

¹ ADB. 2005. *Country Strategy and Program 2005–2009: Cambodia*. Manila.

B. Poverty Analysis**Proposed Targeting Classification: General intervention****What type of poverty analysis is needed?**

The poverty analysis will focus on the impact of the recommended road improvements on the provision of social services, movement of goods and people, and poverty reduction. It will assess the ability of the poor to benefit from the resulting economic activities, and review the potential barriers to the poor benefiting from economic growth. It will examine the role of connecting provincial and district roads as well as the related inland waterways in reducing poverty. The economic analysis will include a distributional analysis between stakeholders, including the poor. A poverty impact ratio will be calculated for the project.

The core analysis will be based on existing data such as the census, national socioeconomic surveys with poverty indicators, and the poverty database developed by the governments of Vietnam and Cambodia. The study will make use of existing studies and reports. Additional quick rural appraisals and key informant interviews will take place after data and information gaps in the analysis have been identified. Provincial data on education and health will be collected to analyze the effect of road conditions and accessibility on social services. If data is available, the poverty analysis will assess the impact of road conditions on cost-efficiency of social service delivery.

C. Participation Process

Is there a stakeholder analysis? Yes No To be prepared under the proposed TA

Is there a participation strategy? Yes No To be prepared under the proposed TA

D. Gender Development**Strategy to maximize impacts on women:**

In conjunction with the stakeholder analysis, a gender assessment will be done where the project has impact and influence. The study will identify potential gender issues to be addressed in the resettlement or social action plan.

Has an output been prepared? Yes No

E. Social Safeguards and other Social Risks

Item	Significant/ Not Significant/ None	Strategy to Address Issues	Plan Required
Resettlement	<input checked="" type="checkbox"/> Significant <input type="checkbox"/> Not significant <input type="checkbox"/> None	<p>Viet Nam and Cambodia will each require the preparation and implementation of a resettlement plan in accordance with ADB's policy on involuntary resettlement and with the full participation of project-affected people.</p> <p>The Viet Nam PMU-MT and Cambodia PMU-MPWT will need orientation and training to prepare and implement the resettlement plan.</p>	<input checked="" type="checkbox"/> Full <input type="checkbox"/> Short <input type="checkbox"/> None
Affordability	<input type="checkbox"/> Significant <input type="checkbox"/> Not significant <input checked="" type="checkbox"/> None		<input type="checkbox"/> Yes <input type="checkbox"/> No
Labor	<input type="checkbox"/> Significant <input type="checkbox"/> Not significant <input type="checkbox"/> None	Uncertain until completion of poverty assessment study, stakeholder analysis, and gender assessment	<input type="checkbox"/> Yes <input type="checkbox"/> No
Indigenous Peoples	<input type="checkbox"/> Significant <input checked="" type="checkbox"/> Not significant <input type="checkbox"/> None	<p>Khmers live in large parts of Kien Giang Province, particularly adjacent to the Cambodian border. A social analysis will determine where the ethnic minority settlements are relative to the road project, and to study the type, scale, nature, and magnitude of impacts the project will have on them, if any. Based on the results of this study, an ethnic minority development plan or a specific action plan may have to be prepared in addition to the resettlement plan.</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Other Risks and/or Vulnerabilities	<input type="checkbox"/> Significant <input type="checkbox"/> Not significant <input type="checkbox"/> None	Uncertain until completion of poverty assessment study, stakeholder analysis, and gender assessment.	<input type="checkbox"/> Yes <input type="checkbox"/> No

COST ESTIMATES AND FINANCING PLAN
(\$'000)

Item	Total Cost
A. Asian Development Bank Financing^a	
1. Consultants	
a. Remuneration and Per Diem	
i. International Consultants	522.2
ii. Domestic Consultants	174.0
b. International and Local Travel	43.1
c. Vehicle Rental	45.0
d. Reports and Communications	23.0
2. Equipment ^b	15.0
3. Training, Seminars, and Conferences	10.0
4. Surveys ^c	50.0
5. Miscellaneous Administration and Support Costs ^d	27.0
6. Representative for Contract Negotiations	8.0
7. Contingencies	82.7
Subtotal (A)	1,000.0
B. Government of Cambodia Financing^e	
1. Counterpart Staff	8.0
2. Provincial Survey Staff	11.0
3. Others	1.0
Subtotal (B)	20.0
C. Government of Viet Nam Financing^e	
1. Counterpart Staff	80.0
2. Provincial Survey Staff	110.0
3. Others	10.0
Subtotal (C)	200.0
Total	1,220.0

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

^b Equipment to be procured will include the following: 2 desktop computers, including standard office software; 2 printers; 2 scanners, 2 photocopiers, 2 fax machines, and 2 digital cameras.

^c Includes for the following surveys: traffic, socioeconomic, topographic, bridge and pavement investigations, unexploded ordnance (surveys to determine extent and degree of contamination and clearance as required to complete regional technical assistance tasks).

^d Includes for office rental, supply of office equipment, and utilities.

^e In kind.

Source: Asian Development Bank estimates.

OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

A. Purpose and Outputs

1. The purpose of this regional technical assistance (TA) is to determine the economic, technical, social, and environmental feasibility of rehabilitating and upgrading transport links and facilities along the Cambodian and Vietnamese sections of the Greater Mekong Subregion (GMS) Southern Coastal Corridor (the Corridor). The TA outputs will include the following: (i) analyses of transport links and determination of the economic, technical, social, and environmental feasibility for (a) each component individually, (b) components within each country, and (c) the project as a whole; (ii) a matrix ranking components and options for combinations of components to form logical projects for a range of funding levels; (iii) a determination of facilities required at the Cambodia–Viet Nam border on the project road; and (iv) a study on the movement of goods and people on the inland waterways within the project-influenced area in Viet Nam.

B. Terms of Reference

2. The terms of reference for the services under the TA will include but not be limited to the following tasks:

- (i) Review the transportation network and pipeline of transport projects in the study area, including the planned upgrading of roads in Cambodia, and update their respective improvement implementation schedules. In Viet Nam, the study will confirm the transport links that will complete the Corridor. These transport links are to be consistent with the overall project rationale. Existing and forecast transport demand and expected trade flows will be estimated.
- (ii) Evaluate the economic growth potential of the project area on the basis of existing and planned investment projects. Review and update potential population growth and potential for tourism development along the southern coast. The evaluation will update the assessment of the potential for economic development along the Corridor.
- (iii) Undertake a multimodal study on the movement of goods and people in the project-influenced area. The study will (a) identify the origin and destination of movements; (b) describe tariff structures and mechanisms by which these tariffs are adjusted; (c) determine volumes of goods and numbers of passengers, and; (d) determine the characteristics of goods and purposes of journeys for people, which can be used as the basis to estimate transfers to the project roads from other transport modes. The study results will be used to develop traffic forecasts for the project in general and, in particular, applied to the analysis of road options between Rach Gia and Ca Mau.
- (iv) Describe the provision of transport services within each country and between countries along the project roads, evaluate competition in the provision of services and setting of tariffs, and determine the project's potential to improve these services. Determine how much benefit from improving the transport network will be passed on to different end users, particularly the poor.

- (v) Survey bridge conditions for each improvement option and implement a bridge rehabilitation and/or upgrading program based on projected loadings.
- (vi) Study the river crossing at Tac Cau and present preliminary analyses and designs to allow comparison of the feasibility of alternatives for improvement of ferry operations and construction of a bridge.
- (vii) Undertake safety audits for all roads for each improvement option.
- (viii) Review the facilities at the Lork–Xa Xia border crossing and determine what it needs to operate as an international crossing under the GMS Agreement on Facilitation of Cross-Border Transport of Goods and People. This review should take account of the adoption of “extraterritorial performance of duties of border authorities” as the modality for implementing a single-stop inspection.
- (ix) Based on the results of engineering investigations, prepare preliminary designs, construction quantities, and overall construction costs for each sample subproject road section for each improvement option. Break down costs into foreign exchange, local currency, and tax components. Indicate direct and indirect foreign exchange separately.
- (x) Calculate economic vehicle operating costs for each sample subproject with and without the proposed improvements, based on estimated changes in road surface roughness. Quantify the benefits (using shadow prices) for each project road section and for each improvement option, including time savings generated from reduced congestion and travel distance, road maintenance savings, traffic accidents, etc.
- (xi) Determine the extent of unexploded ordnance contamination, degrees of contamination, and costs for clearance under civil works contracts.
- (xii) Assess the economic internal rate of return (EIRR) by homogenous road section based on ADB’s *Guidelines for Economic Analysis of Projects*. Derive appropriate sensitivity and switching values by varying the major parameters affecting project viability. Include a full distribution analysis. The economic analysis will use the Highway Design and Maintenance Standards Model IV (HDM IV) to evaluate the alternatives and assess the total life-cycle costs. The analysis will identify risks and undertake appropriate risk and sensitivity analysis with respect to EIRR in accordance with ADB’s *Handbook for Integrating Risk Analysis in the Economic Analysis of Projects*.
- (xiii) Based on the results of the work on the Cambodian and Vietnamese sections, the project will be analyzed as a whole to determine economic viability, as compared to the separate national components, and distribution of benefits between Cambodia and Viet Nam.
- (xiv) Prepare a matrix to determine viable levels of improvement for each link for a range of funding options. It will allow identification of the optimum improvement packages for the Vietnamese section of the project within budget constraints and allow for the different options between Rach Gia and Ca Mau.

- (xv) Prepare detailed poverty profiles of the communities traversed. In parallel and for the same roads, conduct a preliminary assessment of the potential for road improvements to reduce poverty.
- (xvi) Undertake a poverty analysis focusing on the impact of the recommended road improvements on the provision of social services, movement of goods and people, and poverty reduction. The economic analysis will include distributional analysis between stakeholders, including the poor. A poverty impact ratio will be calculated for the project.
- (xvii) The project's environmental impacts will generally be minor, as it will principally consist of rehabilitation and widening of existing roads. However, a small-scale TA (footnote 5) identified several protected and sensitive areas close to some road sections. To ensure that environmental impacts here are fully identified and appropriate mitigation measures designed, environmental impact assessments will be prepared for the Cambodia and Viet Nam sections. The assessments will emphasize coastal habitats and pay particular attention to protected areas and other environmentally sensitive areas. The assessments will be prepared in accordance with ADB's *Environmental Policy* and the guidelines available on the ADB's website.¹
- (xviii) Estimate and break down the cost of implementing environmental mitigation measures, monitoring the project, and developing the capacity of provincial authorities to assess and monitor environmental impact assessments and environmental management plans.
- (xix) Identify and prepare socioeconomic profiles of the project-affected communities in accordance with (a) ADB guidelines and publications, including *Handbook on Poverty and Social Analysis* (2001), *Handbook on Resettlement* (1998), and *Handbook for Incorporation of Social Dimensions in Projects* (1994); and (b) the requirements of Cambodia and Vietnam, as appropriate. The profiles will include gender and local ethnic minority profiles. The evaluation will describe the incidence of poverty in the project area and assess the causes of poverty and the extent to which the project will address them. Ethnic minorities and other vulnerable groups within the zone of influence should be identified, together with the potential impact of the project on them. When negative impacts are identified, mitigation measures will be developed and their costs estimated.
- (xx) Undertake social analysis as per the guidelines above and ADB's *Policies on Involuntary Resettlement* (1995), *Indigenous Peoples* (1999), and *Gender and Development* (1998). Review and assess the impacts of land acquisition or loss of land use on project-affected people (loss of homes, agricultural and other lands, access to income-generating activities), including impacts caused by permanent or temporary acquisition.
- (xxi) As resettlement impacts will be significant, prepare a full resettlement plan for the project components within each province along the project road as per ADB's *Policy on Involuntary Resettlement* and *Handbook on Resettlement: A Guide to*

¹ At http://adb.org/documents/Guidelines/Environmental_Assessment/eaguidelines002.asp

Good Practice. Stakeholders and the executing and implementing agencies should participate fully in preparing the plan.

- (xxii) If the social analysis determines that ethnic minorities are likely to be affected significantly by the project or that they are disadvantaged or vulnerable because of their social or cultural identity, a time-bound ethnic minority development plan, including specific measures and approaches to address their concerns, must be developed in accordance with ADB's policy on indigenous people. Stakeholders and the executing and implementing agencies should participate fully in preparing the plan.
- (xxiii) As the project is a regional transport corridor, HIV/AIDs transmission and human trafficking are risks. These will be mitigated by awareness campaigns for communities in the project area and for temporary communities around construction camps. These campaigns will take account of ongoing programs and initiatives in the project area and will include the development of appropriate items to be included in civil works contracts.
- (xxiv) Develop a detailed logical framework for the ensuing project, including goals, purpose, outputs with corresponding measurable performance indicators and targets, monitoring mechanisms, and risks and assumptions.
- (xxv) Assess the capacity of central and provincial institutions to plan, manage, implement, finance, and monitor land acquisition, compensation, and resettlement. Identify capacity-building measures to be included in the project.
- (xxvi) Assess the capacity of central and provincial institutions for environmental impact assessment and environmental management. Prepare a training needs assessment and recommend improvements to institutional arrangements.
- (xxvii) Define project implementation arrangements, demonstrate the relationship between relevant institutions, and indicate the responsibilities of each unit in a participatory implementation framework. A critical review of the implementation arrangements should help improve the project implementation structure and personnel. Based on the above, recommend a project implementation structure that will allow any subsequent project to be effectively prepared, managed, and implemented.
- (xxviii) Describe the accounting and audit processes and procedures of the implementation agencies, including documents and funds flows and especially the integrity and completeness of auditing.
- (xxix) Prepare outline terms of reference to implement the strategies, training, capacity building, and other interventions identified above. The terms of reference must include detailed budgets and implementation schedules.
- (xxx) Prepare sample contract documents and technical specifications for improvement contracts. For contracts to be bid by international competitive bidding, documentation must follow ADB's *Standard Bidding Documents for Procurement of Civil Works*. For contracts in Viet Nam to be procured by local competitive

bidding, the bidding documents should follow the agreed-on formats used under other projects.

- (xxxii) Prepare terms of reference for a construction supervision consultant to be engaged during project implementation.
- (xxxiii) Design a project performance monitoring system in accordance with ADB's *Guidelines for Project Performance Monitoring*.
- (xxxiiii) For the Vietnamese portion of the project, prepare pre-feasibility and feasibility reports and a project bidding plan for submission to the Government.

C. Reporting Requirements

3. The consultants will prepare the following reports for the General Department of Public Works (GDPW), My Thuan project management unit (PMU-MT), and ADB: (i) **inception report**, 4 weeks after services start; (ii) **brief progress reports**, monthly, based on the implementation and staffing schedules in the inception report; (iii) an **interim report**, at the end of the third month of services; (iv) a **draft final report**, at the end of the eighth month, presenting all aspects of the study results, including surveys, findings, recommendations, suggested approaches to implementation, and all other matters leading to a recommended project for possible ADB financing; (v) **final report**, 1 month after comments on the draft final report are received from GDPW, PMU-MT, and ADB.

4. Tripartite meetings will be held after submission of the inception, interim, and draft final reports. Venues for tripartite meetings will alternate between Phnom Penh and Ho Chi Minh. Two workshops will be held after submission of the draft final report to present the project to the governments, nongovernment organizations, and other stakeholders. One workshop will be held in Phnom Penh and focus on the Cambodian components of the project. The other will be held in Ho Chi Minh and focus on the Vietnamese components.