

ASIAN DEVELOPMENT BANK

TPA: REG 2002-19

TECHNICAL ASSISTANCE PERFORMANCE AUDIT REPORT

ON

ROAD SECTOR MANAGEMENT

IN

**LAO PEOPLE'S DEMOCRATIC REPUBLIC,
PAPUA NEW GUINEA, AND PHILIPPINES**

December 2002

CURRENCY EQUIVALENTS

		At TA Approval	At TA Completion	At Operations Evaluation
Lao People's Democratic Republic				
Currency Unit – kip (KN)				
TA 1897-LAO		(June 1993)	(February 1995)	(September 2002)
KN1.00	=	\$0.0014	\$0.0014	\$0.0001
\$1.00	=	KN717	KN719	KN10,620
Papua New Guinea				
Currency Unit – kina (K)				
TA 3004-PNG		(April 1998)	(May 2001)	(September 2002)
K1.00	=	\$0.505	\$0.343	\$0.249
\$1.00	=	K1.98	K2.92	K4.01
TA 3378-PNG		(December 1999)	(May 2002)	(September 2002)
K1.00	=	\$0.371	\$0.268	\$0.249
\$1.00	=	K2.70	K3.73	K4.01
Philippines				
Currency Unit – peso (₱)				
TA 2652-PHI		(September 1996)	(April 2001)	(September 2002)
₱1.00	=	\$0.038	\$0.020	\$0.019
\$1.00	=	₱26.26	₱49.37	₱51.95

ABBREVIATIONS

ADB	–	Asian Development Bank
BOE	–	Bureau of Equipment, Philippines
DMC	–	developing member country
DOWT	–	Department of Works and Transport, PNG
DPWH	–	Department of Public Works and Highways, Philippines
Lao PDR	–	Lao People's Democratic Republic
MCTPC	–	Ministry of Communication, Transport, Post, and Construction; Lao PDR
OEM	–	Operations Evaluation Mission
PNG	–	Papua New Guinea
RAMS	–	road asset management system
RES	–	Regional Equipment Services, Philippines
RMF	–	Road Maintenance Fund
TA	–	technical assistance
TOR	–	terms of reference
TPAR	–	technical assistance performance audit report

NOTES

- (i) Fiscal years (FYs) of the governments end as follows: Lao PDR, 30 September; Papua New Guinea and Philippines, 31 December. FY before a calendar year denotes the year in which the fiscal year ends.
- (ii) In this report, "\$" refers to US dollars.

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BASIC TECHNICAL ASSISTANCE DATA

TA 1897-LAO: Privatization and Management of Road Sector Institutions¹

Cost (\$'000)²	Estimated	Actual
Foreign Exchange	820	797
Local Currency	130	128 ³
Total	950	925
Number of Person-Months (consultants)	50	57
Executing Agency Ministry of Communication, Transport, Post, and Construction		
Milestones		Date
President's/Board Approval		1 Jun 1993
Signing of TA Agreement		8 Sep 1993
Fielding of Consultants		8 Nov 1993
TA Completion:	Expected	30 Sep 1994
	Actual	1 Feb 1995
TCR Circulation		not required
Mission Type	Number	Date
Fact-Finding	1	12 Nov–1 Dec 1992
Review	—	— ⁴
Operations Evaluation ⁵	1	13–19 Sep 2002

TA 2652-PHI: Privatization of DPWH Equipment and Workshops⁶

Cost (\$'000)⁷	Estimated	Actual
Foreign Exchange	653	651
Local Currency	172	159 ³
Total	825	810
Number of Person-Months (consultants)	46	48
Executing Agency Department of Public Works and Highways		
Milestones		Date
President's/Board Approval		30 Sep 1996
Signing of TA Agreement		23 Jun 1997
Fielding of Consultants		15 May 2000
TA Completion:	Expected	May 1998
	Actual	1 Apr 2001
TCR Circulation		not required
Mission Type	Number	Date
Fact-Finding	1	9 Oct–21 Dec 1995
Review	9	18 Nov–1 Dec 1999 ⁸
		29 Jun/30 Aug 2000 ⁹
		13 Nov–14 Dec 2000 ⁸
		7 Feb/7 Mar/5 Apr 2001 ⁹
		5–6 Dec 2001 ⁸
		15–25 Jan 2002 ⁸
Operations Evaluation ⁵	1	20–27 Sep 2002

— = not available, DPWH = Department of Public Works and Highways, TA = technical assistance, TCR = technical assistance completion report.
 Note: Footnotes on page iv.

TA 3004-PNG: Road Asset Management System

Cost (\$'000)⁷	Estimated	Actual
Foreign Exchange	870	880
Local Currency	130	48 ³
Total	1,000	928
Number of Person-Months (consultants)	30	46
Executing Agency	Department of Works and Transport	
Milestones		Date
President's/Board Approval		3 Apr 1998
Signing of TA Agreement		5 Jun 1998
Fielding of Consultants		5 Oct 1998
TA Completion: Expected		Sep 2000
Actual		1 May 2001
TCR Circulation		— ¹⁰
Mission Type	Number	Date
Fact-Finding	1	19–26 Feb 1997
Review	2	1–4 Mar 2000 ⁸
		14–27 Mar 2001
Operations Evaluation ⁵	1	13–19 Jun 2002

TA 3378-PNG: Road Asset Management System in the Provinces

Cost (\$'000)⁷	Estimated	Actual
Foreign Exchange	494	460
Local Currency	87	37
Total	581	497
Number of Person-Months (consultants)	15	28
Executing Agency	Department of Works and Transport	
Milestones		Date
President's/Board Approval		28 Dec 1999
Signing of TA Agreement		18 Oct 2000
Fielding of Consultants		15 Jan 2001
TA Completion: Expected		end Dec 2000
Actual		31 May 2002
TCR Circulation		— ¹⁰
Mission Type	Number	Date
Fact-Finding	—	— ¹¹
Review	4	14–27 Mar 2001 ⁸
		17–19 Jul 2001 ⁸
		22–26 Oct 2001 ⁸
		25–31 May 2002 ⁸
Operations Evaluation ⁵	1	5–11 Sep 2002

Footnotes

¹ Attached to Loan 1234-LAO(SF): *Sixth Road Improvement Project*.

² Financed by the Asian Development Bank (ADB).

³ Operations Evaluation Mission estimate.

⁴ Mission data is not available.

⁵ The Operations Evaluation Mission comprised A. Ibrahim (Evaluation Specialist/Mission Leader) and J.A. Johnson (Staff Consultant/Road Transport Specialist).

⁶ Attached to Loan 1473-PHI: *Sixth Road Project*.

⁷ Financed by ADB from the Japan Special Fund.

⁸ Multiproject mission.

⁹ Tripartite meeting.

¹⁰ TCR to be prepared by end-2002.

¹¹ No fact-finding mission fielded.

EXECUTIVE SUMMARY

The Asian Development Bank (ADB) was requested by the governments of Lao People's Democratic Republic (Lao PDR), Papua New Guinea (PNG), and Philippines to assist in strengthening their road sector management. The rationale of the two technical assistance (TA) grants attached to the Sixth Road Improvement Project in the Lao PDR, approved in June 1993, and the Sixth Road Project in the Philippines, approved in September 1996, was to support privatization and management of road sector institutions. The two stand-alone TAs in PNG on implementation of a road asset management system (RAMS), approved in April 1998 and December 1999, respectively, laid the foundation for facilitating future institutional changes to strengthen road sector management.

The scope of the four TAs varied with the stage of development of the road network and road sector maintenance and rehabilitation entities in the three developing member countries. The scope of the Lao PDR TA was to provide management assistance to already privatized road transport enterprises and assist in the privatization of the remaining state-owned enterprises involved in road transport, construction, and maintenance. The scope of the Philippine TA was to determine the optimum strategy for managing plant, equipment, and workshops of the Department of Public Works and Highways for which the Bureau of Equipment (BOE) and the Regional Equipment Services (RES), under the technical supervision of BOE, were responsible. The first PNG TA consisted of two parts. The first part included implementing the RAMS for national roads as a planning and prioritizing framework for maintenance and rehabilitation, and sustaining the RAMS at a national level with capacity building. The purpose of the second part was to expand the use of the RAMS to four pilot provinces. The second PNG TA was to further expand such use to the remaining 15 provinces.

The design of all four TAs was appropriate and consistent with the three governments' sector goals and priorities. The final reports were adequate and provided the governments with sound advice.

Three TAs were significantly delayed. The Philippine TA was delayed by almost 3 years due to delays experienced in arranging cofinancing of the loan to which the TA was attached. For the four pilot provinces covered by the first PNG TA, the preparation of inventory and methodologies took 8 months longer than expected. This, in turn, delayed the start of the second PNG TA, the logical extension of the first. The sequencing of the two PNG TAs was not appropriate, as the second TA was approved 16 months prior to the completion of the first one.

The privatization momentum initiated in the Lao PDR has been sustained, even though lack of credit remains a constraint for the privatized activities, including contractors, passenger and freight operators, and design companies. Procurement procedures developed under the Lao PDR TA are followed in practice to a large degree. In the Philippine TA, liquidating BOE was found to be the only financially viable option because of the 1996 decision by the Government to allow private companies a 70% share of all maintenance works and BOE's large, obsolete, and inoperable equipment fleet difficult to sell except for its scrap value. In September 2002, the Government decided to close down BOE and RES. There is some concern that the affected employees will mount protests, which may lead to a reversal of the decision taken; however, this does not seem likely at present as dialogue among the relevant government agencies, including the staff affected, has already begun in a constructive manner. Although there is considerable client ownership, the sustainability of the first PNG TA is assessed less likely because of difficulties in maintaining the RAMS database. An international consulting team, funded under a subsequent ADB loan, is still involved in operationalizing the

RAMS. The second PNG TA is also assessed less likely to be sustainable, for the same reasons as the first one plus the fact that, at present, not all the provincial governments are committed to the RAMS, with only 11 of 19 provinces having signed the memorandum of understanding covering its application.

The key issues that have affected the four TAs but were not directly related to their purpose are (i) complex bureaucratic structures and decision making, and a geography prone to natural disasters; (ii) governance issues; (iii) lack of credit facilities for equipment and materials; and (iv) inadequate funding for the road sector in general. In addition, the Philippine and PNG governments have experienced difficulties in retaining qualified engineers, particularly in the provinces, due to low salaries in comparison with the private sector.

The TA in the Lao PDR is rated successful, as the process of privatization is under way. The Philippine TA is rated successful, as it has contributed to the objective of restructuring and commercializing road construction and maintenance; the process of closing down BOE and RES has begun. The first PNG TA is rated successful, as the RAMS has been installed for the national network. However, the second PNG TA is rated only partly successful, as the installation for the provincial networks is still in the implementation stage, the provincial coverage is incomplete, and adequate coordination and feedback mechanisms envisaged are not in place.

The lessons learned include the following: (i) for politically sensitive TA recommendations, a TA attached to a loan may be a more effective mechanism than a stand-alone TA, as ADB and the stakeholders remain engaged in dialogue for a longer period; (ii) long-term involvement with stakeholders is necessary to maintain momentum and interest in privatization and RAMS; (iii) where staff retrenchment is considerable, transition arrangements need to be designed under the TA to minimize the political and social costs of downsizing; and (iv) in the initial stages of transition, when economies like the Lao PDR experience pervasive state control, accompanied by inefficient use of scarce resources, and a banking sector not motivated to deal with the private sector, management buy-outs should be considered for privatization.

The evaluation has identified the need for (i) continued support for road maintenance, including advisory support to public works departments in the three developing member countries and strengthening of the managerial and technical skills in the private contracting industry; (ii) in PNG, prompt feedback from the RAMS at national headquarters to the provinces once provincial data has been submitted; and (iii) transborder agreements to facilitate international commerce by the Lao PDR with neighboring countries.

I. BACKGROUND

A. Introduction

1. Inadequate funding for routine maintenance and deficiencies in management have led to deteriorating road networks in several of the Asian Development Bank's (ADB) developing member countries (DMCs) requiring major investment outlays for rehabilitation and upgrading. Thus, the need to protect investment by ensuring that scarce resources are used optimally has been identified as one of the major objectives of reform in the sector.

2. The ADB-supported approach to reform is dependent on the stage of development of road sector institutions in a DMC. The focus has varied from establishing computerized pavement management systems that allow road departments to prioritize scarce resources available to the road sector, to converting such departments into managers of the road network that contract out maintenance and rehabilitation work.

3. In the Lao People's Democratic Republic (Lao PDR) and Papua New Guinea (PNG), efficient transport of passengers and goods is constrained by a limited coverage and poor physical condition of road networks. In the Philippines, inadequate allocations to maintain the road network is the major constraint. The problem has been exacerbated in the three DMCs to varying degrees by inadequate capacity of the road departments and ministries; difficulties in implementing reforms, including commercialization and privatization of road sector institutions; and lack of a computerized pavement management system capable of prioritizing annual funding allocations.

B. Scope of the Technical Assistance Performance Audit Report

4. This technical assistance performance audit report (TPAR) covers four technical assistance (TA) grants. Two of them supported privatization and management of road sector institutions in the Lao PDR¹ and the Philippines,² and were attached to road sector projects.³ The other two were provided on a stand-alone basis to help establish a road asset management system (RAMS) in PNG.⁴

5. TA 1897-LAO focused on privatization and management of road sector institutions, including design companies, contractors, and passenger and freight operators. TA 2652-PHI focused on restructuring the Bureau of Equipment (BOE) as a commercial institution operating in the private sector. The two TAs in PNG differed from those in the Lao PDR and the Philippines in that they focused on implementation of a road asset management tool, which laid the foundation for policy dialogue concerning future institutional changes (para. 23).

6. None of the four TAs covered by the TPAR have been evaluated by the operations departments. The loans to the Lao PDR and the Philippines to which the TAs were attached are ongoing, and hence there has been no project completion report yet. A joint TA completion report for TA 3004-PNG and TA 3378-PNG is scheduled for the end of 2002. However, the output, as stipulated in the objectives and scope of the four TAs, is already available and can be evaluated in this TPAR.

¹ TA 1897-LAO: *Privatization and Management of Road Sector Institutions*, for \$950,000, approved on 1 June 1993.

² TA 2652-PHI: *Privatization of DPWH Equipment and Workshops*, for \$825,000, approved on 30 September 1996.

³ Loan 1234-LAO(SF): *Sixth Road Improvement Project*, for \$26 million, approved on 1 June 1993; and Loan 1473-PHI: *Sixth Road Project*, for \$167 million, approved on 30 September 1996.

⁴ TA 3004-PNG: *Road Asset Management System*, for \$1 million, approved on 3 April 1998; and TA 3378-PNG: *Road Asset Management System in the Provinces*, for \$581,000, approved on 28 December 1999.

C. Major Objective of the Technical Assistance

7. All four TAs aimed to improve road sector management. In the Lao PDR, the focus was on privatization. In the Philippines, the objective was to determine the optimum strategy for managing the operation and maintenance of equipment and workshops owned by the Department of Public Works and Highways (DPWH).⁵ In PNG, the objective was to enable the Department of Works and Transport (DOWT) to prioritize the allocation of scarce funds based on the actual condition of roads.

D. Approach and Methodology of Evaluation

8. The TPAR is based on a review by the Operations Evaluation Mission (OEM) of relevant documentation, including review mission reports, where available; data evidencing the impact of the TAs; and discussions with stakeholders from both the private and the public sector. The OEM has assessed whether (i) TA design was appropriate to the TA objectives; (ii) TA inputs achieved the desired outputs; (iii) the outputs were adequate and of sufficient quality to meet the TA objectives; (iv) TA impact has been sustainable; and (v) ADB, governments, executing agencies, and consultants performed adequately.

9. The TPAR synthesizes the findings of the OEM on (i) TA objectives, design, scope, inputs and implementation, and outputs and impacts; (ii) sustainability of TA benefits; and (iii) issues and lessons learned. The four TAs are evaluated in detail in Appendixes 1–3.

II. TECHNICAL ASSISTANCE FORMULATION AND IMPLEMENTATION

A. Scope and Design

10. The rationale and concept of all four TAs were relevant and their objectives consistent with the sector goals of the governments and ADB. In the case of the Lao PDR, the TA supported the transition to a market economy by privatizing road institutions. In the Philippines, the emphasis was on decentralization and privatization. For PNG, the Government's strategy has been to support maintenance planning and preservation of road infrastructure. Appendix 4 provides the logical framework for the four TAs evaluated.

11. The design of the four TAs was generally appropriate and compatible with their objectives. TA 1897-LAO proposed measures to ensure competitiveness of the newly privatized entities. It provided support to management of newly privatized enterprises and helped privatize the remaining government-owned road transport, construction, and maintenance enterprises. The design of TA 2652-PHI was appropriate, as restructuring of DPWH's equipment and workshops was found to be the only financially viable option after the 1996 decision to source out 70% of all routine maintenance works to private contractors. During the midterm review of the loan to which TA 2652-PHI was attached, the Government agreed to raise the private sector share to 75% in the 2002 budget.⁶ A deficiency in the design was its failure to provide for a plan for transitional arrangements, including change management and counseling, to minimize the social costs of downsizing and layoffs of approximately 4,500 employees (BOE and RES combined).

⁵ DPWH operates a large equipment pool through a network of workshops forming the Regional Equipment Services (RES). RES is under the technical supervision of BOE, a staff bureau providing support in maintenance planning, fleet operations, and fleet management. Decisions that affect BOE affect also RES. References to BOE in this TPAR include RES.

⁶ However, this has not been accomplished.

12. TA 3004-PNG developed a RAMS that is being applied to formulate a national road maintenance budget. The follow-on TA 3378-PNG expanded the RAMS to cover the provincial road network. Training was provided under both TAs on the use of the RAMS that covers 20,000 kilometers of roads. Some design issues associated with the RAMS were identified by a recent ADB study, which concluded that DMCs sometimes sidelined the RAMS because of difficulty in maintaining the database.⁷ An international consultant team is still involved in operationalizing the RAMS in PNG, funded under a subsequent ADB loan.⁸ The risks identified by the ADB study may need to be dealt with in the future.

B. Engagement of Consultants

13. The OEM confirmed that consultants for all four TAs were engaged in accordance with ADB's *Guidelines on the Use of Consultants*. The final report of TA 2652-PHI recommended a 1-month increase in the input of the domestic consultants as early validation work had indicated that the database on road assets was not consistent with actual data received from the field. An increase from the original 15 to 28 person-months was requested for TA 3378-PNG due to inadequate support from the assigned counterparts during the initial stages of the TA. The increase was accommodated in the original budget.⁹

C. Technical Assistance Inputs and Implementation

14. Actual mobilization of consultants under TA 1897-LAO was behind the original implementation schedule. However, once the consultants were fielded, implementation was in accordance with the time frame specified in the consulting contract. ADB expanded the terms of reference (TOR) of the consultants to prepare a draft roads act and a river ports operation study. The TA was completed in early 1995, only 4 months behind schedule. By contrast, completion of TA 2652-PHI was delayed by about 3 years, as the effectiveness of the loan to which the TA was attached (footnote 3) was deferred until the cofinancing arrangements for the loan were successfully concluded. The TOR was expanded to include an assessment of the financial situation of BOE. Completion of TA 3004-PNG was delayed by 8 months, as the preparation of inventory and methodologies for the four pilot provinces took longer than expected. TA 3378-PNG commenced only after work in the pilot provinces was completed under TA 3004-PNG, and was completed 17 months behind schedule.

D. Performance of the Asian Development Bank

15. ADB's performance in the Lao PDR and the Philippines was satisfactory. Adjustments to the TOR as requested by the two governments were accommodated by ADB. The pace of policy reforms has been slow in both countries because of the politically sensitive nature of the final reports' recommendations. ADB has remained engaged in the reform process, as envisaged in the final reports of the two TAs, through review missions for the loans to which they were attached. In PNG, the sequencing of the two TAs was inappropriate. Delays in implementing the first TA should have been taken into account when proceeding with the follow-on TA.

⁷ ADB. 1999. *Road Funds and Road Maintenance, An Asian Perspective*. Manila. This study was prepared under TA 5871-REG: *Road Funds Strategy*, for \$350,000, approved on 2 December 1999.

⁸ Loan 1709-PNG: *Road Maintenance and Upgrading (Sector) Project*, for \$63 million, approved on 16 November 1999.

⁹ This was possible as the unit rates applied in the budget were well in excess of the rates negotiated with the consultants engaged.

E. Performance of Governments and Executing Agencies

16. The organization and management of TA 1897-LAO, TA 3004-PNG, and TA 3378-PNG were generally satisfactory. The Ministry of Communication, Transport, Post, and Construction (MCTPC) for TA 2897-LAO and DOWT for TA 3004-PNG and TA 3378-PNG were the appropriate executing agencies. DPWH was the executing agency for TA 2652-PHI, with BOE being responsible for day-to-day implementation. BOE was not the appropriate agency to do this, as it was effectively charged with providing information to consultants whose TOR included assessing options for restructuring BOE, including its liquidation. As a consequence, the consultants faced difficulties with BOE staff and had to constantly refer back to DPWH for authorizing access to information available at BOE.

III. EVALUATION OF OUTPUTS AND IMPACTS

A. Adequacy and Quality of Reports

17. The consultants prepared fairly detailed reports and provided the three DMCs with sound policy advice. The final report for TA 1897-LAO was satisfactory, and its recommendation regarding the most appropriate privatization model was agreed upon after consultations with MCTPC.¹⁰ The recommended privatization model took the form of management buy-outs and was considered appropriate for a transition economy like the Lao PDR. The report assessed inadequate credit as a serious impediment to the promotion of private sector participation in the road sector. As an interim solution, it recommended that bid bonds and advance guarantee requirements be waived and performance security be replaced by not requiring a deposit in banks equivalent to 100% collateral. The final report for TA 2652-PHI assessed that liquidation of BOE was the only financially viable option. In addition, it pointed out that, unless an appropriate mitigating package as part of a restructuring plan was agreed upon with BOE employees, any plan would face strong opposition from the employees and within the legislature. The final reports for TA 3004-PNG and TA 3378-PNG adequately described the RAMS components including a road information database, a geographic information system, a system of strip maps of road section profiles, and a highway design model for economic analysis.

B. Training and Technology Transfer

18. The training component of TA 1897-LAO focused on management of private road sector entities. This was appropriate, as the emerging private sector did not have basic skills associated with operating in a market economy (e.g., in bid preparation by civil works contractors and in truck and bus costing systems for the transport operators). In the Philippines, no training was required. However, a workshop was held to discuss concerns and visions for the future of the road construction industry. Representatives from BOE also participated, and their concerns were noted.

19. Training was successfully provided under TA 3004-PNG and TA 3378-PNG at each stage of development, installation, and operationalizing of the RAMS. In addition, training was also provided in the preparation of feasibility analysis for projects identified in the first year of the program. Two trained staff were lost to more lucrative jobs in the private sector. The number of

¹⁰ This was in line with ADB's covenant for the loan to which the TA was attached (footnote 3). The covenant stipulated that, upon completion of the TA, the Borrower should discuss the findings with ADB and agree on an action plan to implement the findings and recommendations of the TA.

the remaining ones, seven at the time of the OEM's visit, is the minimum required for the RAMS, and it may be advisable to have backup in case any one leaves.

C. Institution Building and Reform

20. TA 1897-LAO focused on institution building in private sector road entities, including design companies, contractors, and passenger and freight transporters, to enable them to operate in a market economy. A number of factors have impeded the growth of private sector activity in the country: (i) lack of credit facilities for the contracting industry; (ii) lack of skilled human resources available to the private sector, especially for design companies; (iii) lack of sufficient demand for the services of contractors given their large number;¹¹ and (iv) the restriction of carriers in through-carriage of goods beyond the Thai border because of delays in implementing ADB-supported transborder agreements. While privatization has not progressed evenly and fast, it has been sustained, and the Lao PDR shows considerable private sector activity in the road sector in comparison with other transition economies in the region. Privatization has largely taken the form of management buy-outs, which have minimized the social disruptions normally associated with privatization in other countries. Some management buy-outs were not successful and companies were stripped of assets. In other instances, former government-owned contractors and maintenance shops were only nominally privatized and continued to operate closely with provincial governments. However, the privatization of passenger and freight transport enterprises has been successful in spite of some residual controls, for example on route competition and prices. By and large, the Government has succeeded in transforming itself into a client of the private service providers in the sector and remains committed to allowing road sector entities to operate within a market economy.

21. TA 2652-PHI did not envisage any institution building. It focused on the optimum strategy for managing the operation and maintenance of DPWH plant, equipment, and workshops. The consultants, in agreement with the prevailing opinion at the time in DPWH, assessed that given the problems facing BOE, the most viable financial option was to liquidate it. This consensus was based on the policy decision allowing private contractors a 70% share of routine maintenance and a BOE fleet that had mostly exceeded its economic life (disposal of equipment and stocks of spare parts for more than scrap value was and continues to be difficult).

22. In PNG, the OEM noted that the RAMS was starting to play an important role in planning and budgeting road maintenance activities. However, allocations for road maintenance have not increased due to continued fiscal constraints. Domestic expenditure allocation to the road sector peaked in 1999 to around K37 million but fell sharply the following year to K15 million. By mid-2002, total domestic allocations were less than K7 million, against the estimated required amount for the year of K158 million. In addition, the Government's decision to freeze the number of existing staff in the national public service until 2003 has led to the RAMS being operated by a minimum complement of engineers and technicians. The staffing problem is likely to continue as the pay differential between private and public sector widens. The OEM noted that Government ownership is evident at the national level, as senior government decision maker and politicians have endorsed the RAMS as a means of introducing a new, more transparent approach to planning road maintenance that maximizes economic returns. However, commitment at the provincial level remains weak due to lack of full-time staff. Each provincial administration allocates one staff member for the RAMS who often has two areas of responsibility, filling his/her regular job and undertaking RAMS-related tasks.

¹¹ The Road Administration Division in MCTPC has preregistered 112 contractors, with only 35 contracts awarded each year for maintenance and an additional 30 or so for emergency works.

23. Reforms of road sector institutions in the Philippines and PNG have resulted in the separation of regulatory oversight and service delivery, even though the TAs covered by this TPAR did not directly address this issue. In addition, ADB has engaged the PNG Government in a policy dialogue on the need to establish a road fund in response to the failure of the Government to increase annual maintenance allocations based on the RAMS analysis.

D. Sustainability of Technical Assistance Benefits

24. Privatization momentum has been sustained in the Lao PDR even though lack of credit remains a constraint. Procurement procedures developed under TA 1897-LAO are followed in practice to a large degree. The TA is assessed as sustainable.

25. TA 2652-PHI is sustainable, as the Government is likely to follow through its decision to liquidate BOE. However, there is a concern that the affected employees will mount protests, which may lead to a reversal of the decision taken by the Government. This does not seem likely, at present, as dialogue among the relevant government agencies, namely DPWH, BOE management and staff, and the Department of Budget and Management has begun in a constructive manner and an appropriate mitigating package is expected soon based on previous experience with such packages.

26. Client ownership is clearly evident in TA 3004-PNG. However, there are some difficulties in operating the RAMS. An international consultant team is still involved in operationalizing the RAMS. Experience from other DMCs has shown some risks affecting the long-term sustainability of such systems that are relevant to the sustainability of TA 3004-PNG as well. Sustainability of TA 3378-PNG is assessed as less likely for the same reasons, with the additional concern that, at present, not all provincial governments are committed to the RAMS. At the time of the OEM's visit, 11 of 19 provinces were included in the program.

IV. CONCLUSIONS

A. Key Issues

27. A number of common issues are relevant to all three DMCs and may affect the performance of the TAs. However, they are not directly related to the purpose of the four TAs.

28. All three DMCs share problems in varying degrees of complex bureaucratic structures and decision-making processes, and geography prone to slides, flooding, as well as other natural calamities, often in remote areas where little is immediately available in private sector support or resources. This has impeded private sector activity in such emergency-prone inaccessible areas and provides justification for maintaining a force account system that would be able to deal with such situations. The Lao PDR has attempted to deal with this problem through some special contract arrangements and equipment sources held by MCTPC or contractors on a retainer basis for dealing with emergencies.

29. Governance issues are evident in the road departments of all three DMCs, with audits and investigations of corruption and misappropriation ongoing in the Philippines and PNG. In the Lao PDR, the Government has acknowledged the need for strengthening financial management, administration, and auditing in road sector institutions.¹² In addition, the contracting industry in all three DMCs faces political pressure on project planning, funding and contract award, and inflexible and cumbersome procedures and regulations.

¹² The TOR approved by the Government for a study funded by the Swedish International Development Cooperation Agency includes assessing the "risks of corruption in general."

30. In the Lao PDR and the Philippines, lack of financing and credit facilities for equipment and materials, and reluctance by banks to accept equipment as collateral have been impeding domestic private sector activity. In the Lao PDR, an interim solution was adopted to counter this problem (para. 17).

31. PNG and the Philippines are facing difficulties in retaining qualified engineers within their road departments because of low salaries in comparison with the private sector. The situation is particularly acute in the provinces. This will cease to be an issue when the force account system is completely replaced with contracting out all works.

32. Inadequate funding for the road sector in general due to fiscal constraints and inadequacy of maintenance funding in particular has been a major problem confronting the road sectors of the three DMCs. The Lao PDR and the Philippines have dealt with this issue through the establishment of dedicated road funds, while ADB is supporting the development of such a fund in PNG.¹³ However, these funds are still in their infancy, with the Lao PDR collections constrained by the small vehicle fleet and the Philippine collections limited to vehicle registration fees. Budgetary funding for national roads has lagged behind the requirements of the road sector in all three DMCs, thus increasing the backlog of maintenance.

B. Overall Assessment

33. The overall rating for the four TAs is derived as follows:

Criteria	TA 1897-LAO	TA 2652-PHI	TA 3004-PNG	TA 3378-PNG
Relevance	Relevant, as it provided the basis for institutional changes and was in consonance with the government strategy to privatize state institutions.	Highly relevant, as it addressed the need to rationalize DPWH in the aftermath of putting into effect the policy on the use of private contractors for maintenance.	Highly relevant in providing a planning and budgeting tool and improving the credibility of DOWT budget submission.	Highly relevant in providing a planning and budgeting tool.
Efficacy	Efficacious, as its objective to assist the Government in privatizing state institutions was largely met.	Efficacious, as its objective is likely to be met with the cabinet decision to close down BOE.	Efficacious, as the RAMS has been installed and is in use.	Less efficacious; implementation of the RAMS program is still in progress with only 11 of 19 provinces having signed the memorandum of understanding and no full time RAMS coordinator in the provinces.
Efficiency	Efficient, with the consultants using their time and TA resources efficiently.	Efficient, as the consultants utilized their time and resources to formulate strategy for rationalizing BOE operations.	Efficient, as the consultant input was vital to establishing the RAMS.	Less efficient, as there is inadequate feedback from RAMS headquarters to provincial counterparts.

BOE = Bureau of Equipment, DOWT = Department of Works and Transport, DPWH = Department of Public Works and Highways, LAO = Lao People's Democratic Republic, PHI = Philippines, PNG = Papua New Guinea, RAMS = road asset management system, TA = technical assistance.

¹³ TA 3716-PNG: *Road Authority Development*, for \$700,000, approved on 11 September 2001.

Criteria	TA 1897-LAO	TA 2652-PHI	TA 3004-PNG	TA 3378-PNG
Sustainability	Likely, as the privatization momentum has been sustained.	Likely, as the Government has decided to close down BOE.	Less likely in the long run, as there are problems with operating RAMS related to funding for road maintenance, institutionalizing the RAMS, and assigning trained staff.	Less likely for same reasons as for TA 3004-PNG and present incomplete provincial coverage of the RAMS program.
Other Impacts	Significant, as privatization enables efficient use of human and financial resources.	Moderate, as BOE has not yet been disbanded and the decision to increase the private sector share to 75% in maintenance contracts has not been taken.	Moderate, with little impact on actual budget allocations even though there is appreciation of the strength of the RAMS analysis.	Moderate for same reasons as for TA 3004-PNG.
Overall Rating	Successful	Successful	Successful	Partly successful

Source: Operations Evaluation Mission.

34. TA 1897-LAO is rated successful, as there is significant progress in achieving its longer-term objectives. The Lao PDR is firmly on the path to privatization in the road transport sector even though lack of credit and engineers with complex design skills continue to constrain the private contracting industry. Privatization has been neither smooth nor even throughout the country; however, this would not be an unexpected outcome in most countries embarking on a privatization program.

35. TA 2652-PHI is rated successful, as it has contributed to the objective of restructuring and commercializing road construction and maintenance. The process of closing down BOE has begun. The failure to take prompt action has been attributable to concerns about large-scale retrenchments in BOE. The TA report acknowledged these concerns and noted that an appropriate mitigating approach of offering a suitable incentive package would have significant costs. Negotiations are currently under way on a package acceptable to BOE staff.

36. TA 3004-PNG is rated successful, as the RAMS has been established for the national road network. TA 3378-PNG is rated partly successful; however, with survey work proceeding as planned and with strong government commitment, it is likely that more provincial governments will be brought on board, and a higher rating of TA 3378-PNG may be warranted in time.

C. Lessons Learned

37. A lesson learned is that for politically sensitive recommendations, a TA attached to a loan, possibly with a covenanted time-bound action plan as in Loan 1234-LAO (footnote 3), may be a more effective mechanism than a stand-alone TA as ADB and the other stakeholders will remain engaged through the duration of the loan. It has been an advantage that progress in implementing the politically sensitive recommendations related to privatization in the Lao PDR and disbanding BOE in the Philippines could be monitored by frequent loan review missions over a long period.

38. All four TAs share the common lesson of requiring long-term involvement with the stakeholders, with support and follow-up over a period of 5 or more years, to maintain momentum and stakeholder interest.

39. Where significant retrenchments are anticipated, TAs need to consider recommendations for transitional arrangements, including change management and counseling. These are necessary to minimize the social costs of downsizing. Furthermore, in TAs that substantially affect components of the executing agencies, the reporting channel of the consultants needs careful consideration.

40. In the initial stages of transition, when economies have pervasive state control over road sector institutions, and a banking sector that is not motivated to deal with the private sector, privatization may take the form of management buy-outs and may precede attempts to reform the banking sector.

41. Assessing risks that are known to be associated with any pavement management system like the RAMS should be stressed in the TOR of the consultants; otherwise, such risks may be ignored, affecting the long-term sustainability of the system.

D. Recommended Follow-Up Actions

42. Continued technical support for road maintenance, including advisory support to public works departments, is required in the three DMCs. The same applies to strengthening managerial and technical skills in the private contracting industry. While the mechanism by means of which such skills can be strengthened exists in the Lao PDR through the Telecommunication and Communication Training Institute and in the Philippines through the Philippine Constructors Association Incorporated, it needs to be upgraded. However, no such mechanism exists in PNG. It is recommended that training to local contractors be considered in PNG through encouraging the establishment of a private sector contractor association by the end of 2004.

43. To increase and sustain interest in PNG provinces, the RAMS headquarters needs to give prompt feedback once provincial data has been submitted. Furthermore, full-time RAMS coordinators at the provincial level need to be in place by the end of 2003.

44. To complement ADB support for development of the international expressway network within the Greater Mekong Subregion, and to strengthen the ability of the Lao PDR transport operators to participate in cross-border commerce, programs to enhance their managerial skills and assist them in acquiring modern vehicle fleets should be considered by the end of 2003. The Lao PDR transport operators are still restricted in through-carriage of goods beyond Thai border points in spite of cross-border agreements due to delays in the accompanying protocols and articles. ADB should facilitate completion of these protocols by the end of 2003.

EVALUATION OF TA 1897-LAO: PRIVATIZATION AND MANAGEMENT OF ROAD SECTOR INSTITUTIONS

A. Background

1. Major road transport routes in the Lao People's Democratic Republic (Lao PDR) follow the north-south pattern of population distribution. East-west links to the borders with Thailand and Viet Nam provide access to their seaports. The condition of the country's transport network, however, remains underdeveloped, and existing roads are in poor condition. The Government's development strategy, supported by the Asian Development Bank (ADB), has been to focus on the transition to a market economy. However, the pace of reforms remains slow due to (i) vested interests in state-owned enterprises; (ii) continued ideological opposition to surrendering control to the market or to foreigners; (iii) bureaucratic red tape; and (iv) discrimination against the private sector by allowing government monopolies, controlling access to land, and issuing licenses.

2. The technical assistance (TA)¹ was intended to assist the sustainable development of the private sector consisting of contractors and passengers and freight operators.

B. Rationale, Objectives, and Scope

3. The TA was attached to a loan project.² Its rationale was to maximize private sector participation within a regulatory framework, with the Government increasingly adopting the role of supervisor and regulator rather than carrying out operations on its own. The main objective of the TA was to provide institutional support to the Ministry of Communication, Transport, Post, and Construction (MCTPC) to strengthen private sector activity in the road sector. The scope of the TA included (i) management assistance to already privatized road transport enterprises, (ii) privatization of the remaining government-owned road transport organizations, and (iii) privatization of the government-operated road construction and maintenance industry.

C. Assessment of Implementation Performance

1. Design of the Technical Assistance

4. TA design was compatible with its objectives. ADB agreed to MCTPC's request to extend the original terms of reference (TOR)³ to examine transport laws and draw up new regulations consistent with international practice, including a roads act, as well as a river ports operation study.

2. Engagement of Consultants

5. International and domestic consultants were hired in accordance with ADB's *Guidelines on the Use of Consultants*. The project team consisted of six international consultants with the necessary expertise required for the TA components. They included a contracting industry expert, a road transport industry expert, a privatization expert, a financial expert, and a coordinator. In addition, a port operations specialist was engaged when the original TOR was

¹ TA 1897-LAO: *Privatization and Management of Road Sector Institutions*, for \$950,000, approved on 1 June 1993.

² Loan 1234-LAO(SF): *Sixth Road Improvement Project*, for \$26 million, approved on 1 June 1993. It is ongoing; however, the project completion report is scheduled for end-2002.

³ The extension of the TOR was intimated to the consultants by ADB in a letter dated 31 August 1994—1 month prior to the expected completion of the TA.

extended (footnote 3). Domestic consultants included a legal adviser, engineering specialist, and a contracting specialist provided adequate support to the international team.

3. Implementation Arrangements

6. MCTPC acted as the Executing Agency, and counterparts were provided from relevant departments within MCTPC. Coordination with other ministries, including the Committee of Planning and Cooperation and the Ministry of Finance, was adequate.

7. Actual mobilization of consultants was behind the original implementation schedule. However, once the consultants were fielded, implementation was in accordance with the time frame specified in the consulting contract. In addition, ADB extended the TOR of the consultants (para. 4). At TA completion, actual disbursements amounted to \$924,909 or about 97% of estimated costs. As the TA was attached to a loan, ADB has remained engaged in the issue of privatization of road sector institutions through loan review missions.

D. Evaluation of Outputs and Impact

1. Adequacy and Quality of Consulting Services and Reports

8. The final report was satisfactory and its recommendations regarding the most appropriate privatization model for the road sector were agreed upon after consultations with MCTPC. The privatization model of open sale of units, first proposed by the consultants, was amended by MCTPC and, in line with ADB's covenant for the Sixth Road Improvement Project,⁴ a transfer of ownership of the enterprise by way of a management buy-out⁵ was proposed and accepted as a model of privatization. The Government agreed to retain equipment as equity until such a time as the company could purchase the remaining shares. In addition, the final report noted an inadequate credit market and lack of interaction between the banks and the enterprises as impediments to private sector activity in the road sector. As an interim solution to this problem, the consultants recommended that the bid bond and advance guarantee requirement should be waived and the performance security be replaced by not requiring a deposit in banks equivalent to 100% collateral. The Operations Evaluation Mission (OEM) noted that the interim solution was appropriate and that privatization may precede banking sector reforms in transition economies where inefficiency in state-operated institutions is a serious impediment to the optimum utilization of scarce allocations to a sector.

2. Training and Technology Transfer

9. As envisaged, formal training was given in three major regional centers—Savannakhet, Luang Prabang, and Vientiane. The topics, as stipulated in the TOR, were related to regulation in the transport sector, truck and bus costing systems, timetable and duty schedule compilation, and development of public bus systems. Seminars and workshops for the contracting and transport industry were held in 1995 and 1996. While there are still limitations in follow-on training and the number of skilled people available in state and private enterprises, MCTPC does offer continued internal and external training programs. Training in bid preparation was

⁴ Schedule 6.III.C(b) of the Loan Agreement stated that the Borrower must ensure that privatization would be achieved through outright sale of assets or transfer of ownership to management and employees of the enterprises or any other private entity.

⁵ The management buy-out could take two forms: (i) sale of assets, which envisaged outside investors purchasing majority shareholding with the existing management left in place; and (ii) joint ventures, which may be with either state provincially owned or privately-owned enterprises.

and continues to be given to contractors through the Telecommunication and Communication Training Institute. Local and expatriate staff directly and indirectly involved with the TA have stayed with the Road Administration Division (RAD), bringing continuity to the training process as envisaged in the TA.

3. Institution Building and Reform

10. Privatization in road sector institutions has been slow and uneven, even though it is sustained, with the Lao PDR showing significant progress in comparison with other transition economies within the region. In some cases, management or employee buy-outs were successful, and contracting companies are operating profitably; in others, as has been a lesson learned from privatization in other countries in general, and in transition economies in particular, companies were stripped of assets. Some contractors continue to undertake work at low or no profit, making it difficult to replace or repair equipment. Part of the problem lies with weak accounting, procurement, and auditing capabilities. In other cases, formerly government-owned contractors or maintenance shops, while nominally privatized, still operate closely with the provincial governments. The Local Roads Division of the Department of Roads of MCTPC is developing standards and procedures for local road maintenance through a force account system by using labor-based methods with equipment support. However, the success of this is limited, as a clear policy on this method has still to evolve in the provinces.⁶

11. Insufficient financial capacity and access to credit for the purchase of equipment is also a limiting factor that needs to be addressed. Companies with majority shareholdings held by Lao PDR nationals are unable to bid for large contracts because of their inability to raise capital. Late payment for work continues to further strain the contractors' cash flows. Furthermore, not all contracts are awarded on the basis of open bidding; for example, small contracts of less than KN80 million are awarded directly. The OEM noted that there is insufficient demand for the number of companies currently operating in the contracting industry. RAD has preregistered 112 contractors. An average of 35 contracts are awarded each year for maintenance. However, an additional 30 plus contracts are awarded for emergency works, depending on annual monsoon damage. For routine and periodic maintenance, approximately 15–20 contractors are actively employed in any given year. But foreign contractors remain in the country, in spite of a slowdown in demand for contracting services, because of optimism about future prospects. The OEM noted that, at present, the bulk of maintenance work is undertaken by the private sector.

12. Passenger and freight transport by land is operating in a competitive market, as recommended in the final TA report. However, some residual controls still exist, for example, in route competition and price controls. Intercity passenger transport has continued to grow with improvement of the national network, and new market entrants and equipment upgrading show a healthy trend. For freight operators, economic conditions have been more difficult, particularly following the 1997–1998 slump and cutbacks in development projects and trade. In an effort to strengthen the Lao PDR trucking industry, the Government is encouraging the formation of a Lao PDR freight forwarders association, with the objective of pooling shipments and gaining economies of scale to effectively compete against foreign carriers in the Lao PDR-Bangkok transport corridors. International agreements developed with ADB support notwithstanding,⁷ Lao PDR carriers are still restricted in through-carriage of goods beyond Thai border points because

⁶ Some provinces maintain that the policy should not entail payment for work done, as the road itself may be considered as a community asset, while others insist that without payment there may be no ownership.

⁷ TA 5749-REG: *Cross-Border Movement of Goods and People in the Greater Mekong Subregion*, for \$550,000, approved on 26 August 1997.

the accompanying protocols and articles, on average, will take a further 3–5 years to become effective.

13. While there are now more local design and survey companies, some in joint venture with foreign owners, only one domestic state-owned company has the capability of designing higher class roads, namely the Lao Transport Engineering Consult, formerly known as the Construction Design Research Institute. However, the OEM found that for complex projects, the design industry remains dependent on technical support from foreign partners, and lacks specialist skills.

14. The Road Act, drafted under the TA, was passed in 1999 and implemented in 2000; however, transport law in the Lao PDR is still developing with respect to alignment of domestic legislation with international practices and conventions and with sector objectives including economic and safety regulations in the transport system.

15. Even though government salaries are low, there has been little movement of staff.⁸ Low demand for contracting work (para. 11) has not expanded the job market in the private sector. In addition, prestige, job security, and externally assisted training programs were cited as incentives to stay within government service at the time of the OEM.

E. Conclusions

1. Key Issues

16. There is a need to further strengthen technical, financial, management, administration, and auditing capabilities in the private road transport sector. Accountability and transparency in the award and performance of contracts remain an issue.

17. The private sector still operates under conditions where access to credit is difficult. In addition, in remote and inaccessible areas, there is little available in terms of private sector support or resources.

18. Notwithstanding significant progress in privatizing road sector institutions, allocations to the road sector remain inadequate. This has impacted negatively on the condition of roads. The Government responded to this challenge by establishing a Road Maintenance Fund (RMF)⁹ on 15 January 2001 through a prime ministerial decree. The RMF collections began in February 2002, with first priority in allocation given to routine maintenance. These consist of (i) fuel levy of KN40 per liter; collections under this head amounted to more than KN2 billion as of June 2002; they are limited by the small road vehicle fleet and constraints on user fuel taxes;¹⁰ and (ii) bridge tolls, heavy vehicle surcharge, overweight fines,¹¹ and international transit fees (the last will be levied as international road corridors are completed through the Lao PDR). As of June 2002, receipts from the latter sources amounted to a little over KN1 billion, and the World Bank had deposited \$3.7 million as seed money for the RMF as part of its \$25 million Road

⁸ However, some MCTPC personnel do have outside jobs and/or their own businesses.

⁹ ADB assisted in the establishment of the RMF through TA 2862-LAO: *Management Information System (Phase II)*, for \$700,000, approved on 9 September 1997.

¹⁰ Constraints include (i) inability to set rates higher than in neighboring countries, as that would encourage the smuggling of fuel; and (ii) the large quantity of tax exempt fuel imported by the military and exempted projects.

¹¹ Overweight fines and their enforcement are vital to preserve the road network from damage. This is especially pertinent in the Lao PDR with a higher pavement strength not justified by the low traffic volume.

Maintenance Project I loan. ADB also provided \$2 million as seed money for the RMF.¹² MCTPC's 10-year Periodic Maintenance Program, February 2000, and the estimates from the World Bank Road Maintenance Project appraisal indicate that a minimum maintenance budget to sustain the national network would require \$15.5 million compared with the allocation of \$2.4 million in 1999–2000 as indicated in Table A1.

Table A1: Road Sector Expenditures in the Lao PDR
(\$ million)

Component	FY1998	FY1999	FY2000
Construction (capital outlay)	34.1	20.9	45.0
Maintenance	2.2	5.7	2.4
Total	36.3	26.6	47.4

Lao PDR = Lao People's Democratic Republic.

Source: The World Bank Road Maintenance Project estimates based on analysis and rationalization of the Ministry of Communication, Transport, Post, and Construction expenditure reports.

2. Overall Assessment

19. The TA is rated successful, as privatization has made considerable progress in the contracting industry. Passenger and freight traffic are now operating in a competitive market.

a. Relevance

20. The TA was relevant in providing building blocks for improved delivery of road institutions. Many of the privatized units were stripped of assets, but this is not unusual during the privatization process (para. 10).

b. Efficacy

21. The TA is rated efficacious, as its objective to assist the Government in privatizing state enterprises was largely met. While the pace has been slow and uneven, the momentum of privatization has been maintained.

c. Efficiency

22. The TA is assessed as efficient, as the consultants utilized their time and resources efficiently to achieve its objectives.

¹² Loan 1795-LAO: *Rural Access Roads Project*, for \$25 million, approved on 7 December 2000, had a periodic maintenance component.

d. Sustainability

23. The TA sustainability is assessed as likely. The privatization momentum has been sustained even though an inadequate credit market is a constraint.¹³ Procurement, bid and tender, and contract procedures developed under the TA have been adopted to a large degree. Further progress in private sector activity is linked to an increase in demand and availability of credit in the country.

e. Other Impacts

24. Other impacts are rated significant, as privatization is gradually leading to more efficient use of human and financial resources.

3. Lessons Learned

25. Privatization is a long-term process and requires continuing engagement and support.

26. Continuity can be brought into the training process with key local and expatriate staff remaining involved with the roads department.

27. In the initial stages of transition, economies like the Lao PDR have complete state control over road sector institutions, accompanied by inefficient use of scarce resources, with a banking sector not motivated to deal with the fledgling private sector. Lack of collateral is a further impediment to privatization. In this context, management buy-outs may be the most appropriate form of privatization and may precede attempts to first strengthen the credit market through interim solutions (para. 8).

4. Recommended Follow-Up Actions

28. To complement ADB support and development of the system of international routes within the Greater Mekong Subregion and to strengthen the Lao PDR transporters' ability to participate in cross-border commerce, a program to enhance their managerial skills and assist them in acquiring modern vehicle fleets should be considered by the end of 2003. Transborder agreements to facilitate international commerce by the Lao PDR with neighboring countries need to be implemented by the end of 2003 through ADB's role as facilitator among the concerned countries.

¹³ ADB, however, remains engaged in assisting the Government to develop the financial sector through its program loans and TAs including (i) Loan 1061-LAO: *Financial Sector Program*, for \$25 million, approved on 6 December 1990; (ii) Loan 1458-LAO: *Second Financial Sector Program*, for \$25 million, approved on 12 September 1996; (iii) TA 3146-LAO: *Commercial Banking Capacity and Efficiency Enhancement*, for \$550,000, approved on 24 December 1998; (iv) TA 3466-LAO: *Strengthening Corporate Governance and Management of State-Owned Commercial Banks*, for \$900,000, approved on 7 July 2000; and (v) TA 3737-LAO: *Financial Sector Development Program*, for \$400,000, approved on 10 October 2001.

EVALUATION OF TA 2652-PHI: PRIVATIZATION OF DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS EQUIPMENT AND WORKSHOPS

A. Background

1. Road transport in the Philippines is the dominant mode, carrying about 60% of freight and 80% of passenger traffic.¹ The road network has been deteriorating, mainly due to inefficient use of scarce resources. Maintenance works covered under a force account system, which necessitated a large plant and equipment pool, under the supervision of Bureau of Equipment (BOE) and Regional Equipment Services (RES). Under the Asian Development Bank (ADB) technical assistance (TA),² it was determined that a force account system did not provide sufficient incentives for efficient and effective operations, with a high proportion of resources spent on administrative costs as opposed to civil works. A policy decision was taken subsequently by the Government to allow private contractors a 70% share in routine maintenance. This made BOE and RES less important.

2. The Government requested ADB assistance in providing institutional support to the Department of Public Works and Highways (DPWH)³ to review the future role of BOE and RES and to ascertain if they could be successfully restructured as commercial institutions.⁴

B. Rationale, Objectives, and Scope

3. The TA was attached to ADB's loan project.⁵ Its major objective was to determine the (i) optimum strategy for managing the operation and maintenance of DPWH plant, equipment, and workshops; and (ii) identify constraints currently inhibiting the development of the road construction industry from realizing its full potential.

4. The scope of the TA included identifying policy options available to enhance the efficiency of DPWH equipment and workshops through privatization, taking account of the social costs implicit in the recommended policy option and undertaking a review of the construction industry.

C. Assessment of Implementation Performance

1. Design of the Technical Assistance

5. The TA design was appropriate, as restructuring of the equipment and workshops of DPWH was found to be the only financially viable option because of (i) the 1996 DPWH decision to allow 70% of all maintenance works to be undertaken by the private sector⁶ (para. 1); and (ii) a large, obsolete, and inoperable equipment fleet difficult to sell except for its scrap value. However, the design was inadequate in that it failed to provide for a plan for the transitional

¹ Economist Intelligence Unit. 2002. Country Report.

² TA 821-PHI: *Pilot Program for Contract Maintenance of National Roads*, for \$400,000, approved on 25 November 1986.

³ DPWH operates a large equipment pool based on a network of workshops through a regional organization, RES, which is under the technical supervision of BOE, a staff bureau providing support in maintenance planning, fleet operations, and fleet management. Decisions that affect BOE affect also RES. References to BOE in this technical assistance performance audit report include RES.

⁴ TA 2652-PHI: *Privatization of DPWH Equipment and Workshops*, for \$825,000, approved on 30 September 1996.

⁵ Loan 1473-PHI: *Sixth Road Project*, for \$167 million, approved on 30 September 1996. It is ongoing.

⁶ The agreement with ADB in the midterm review of Loan 1473-PHI to raise the share of the private sector to 75% in the 2002 budget has not been complied with by DPWH.

arrangements, including change management and counseling to minimize the social costs of layoff of approximately 4,500 employees.

2. Engagement of Consultants

6. Consultants for the TA were engaged in accordance with ADB's *Guidelines on the Use of Consultants*. A 1-month increase in the input of the domestic consultants was requested, as early validation work indicated that the database of road assets was not consistent with actual field data.

3. Implementation Arrangements

7. DPWH was the Executing Agency for the TA, with BOE responsible for the day-to-day implementation. BOE may not have been the appropriate authority, as it was effectively charged with providing information to consultants whose terms of reference included assessing options for commercialization of BOE, including its liquidation, if appropriate. As a consequence, the consultants faced difficulties with BOE staff and had to constantly refer back to DPWH for authorizing access to information available at BOE.

8. Implementation of the TA was significantly delayed for two reasons. First, there was considerable delay in the effectiveness of the loan to which the TA was attached, and the TA did not commence until the cofinancing arrangements for the loan were successfully concluded. Second, the original terms of reference of TA 2652-PHI were extended to include the financial situation of BOE and RES. Thus, the TA completion date was extended by about 3 years. At TA completion, actual disbursement amounted to \$809,847 or about 98% of estimated costs.

9. A Sixth Road Project loan covenant⁷ stipulated that, upon completion of the TA, the Borrower should discuss the findings with ADB and agree on an action plan to implement the findings and recommendations of the TA. With the loan ongoing, ADB has remained engaged in dialogue with the Government on the sensitive issue of retrenchment through loan review missions.

D. Evaluation of Outputs and Impact

1. Adequacy and Quality of Consulting Services and Reports

10. The report was satisfactory and liquidating BOE was assessed as the only financially viable option. The consultants performed adequately and revised the equipment database through field visits and other data comparisons. The report assessed inadequate credit as a serious impediment to the promotion of private sector activity.

2. Training and Technology Transfer

11. A 2-day workshop was held to discuss concerns and visions for the future of the construction industry. It was attended by private contractors and relevant government departments, including BOE staff. The workshop was judged appropriate for the TA.

⁷ Schedule 6, para. 17.

3. Institution Building and Reforms

12. The Philippine Cabinet decided to liquidate 14 government entities in mid-September 2002, including BOE. The mechanism, with the first phase planned to be completed by December 2002, has not been firmed up yet. Currently, BOE employs about 4,500 staff. DPWH and the Department of Budget and Management are preparing a transition plan, which includes an appropriate severance package and, where expertise and skills are available, encouraging former employees to establish private contracting companies.

13. Lack of credit facilities for equipment and materials continues to be a concern for small local contractors, accounting for 87% of the total construction industry in the country. The reluctance of banks to accept equipment as collateral is an additional impediment. Large and medium contractors, who represent 13% of the total, also experience liquidity problems, which contributes to their difficulty in competing with international contractors. Slowness of payment for government contracts is another impediment to the financial health of the local contractors. Further constraints on the road construction industry include political pressures on project planning, funding, and contract award, inflexible and cumbersome procedures and regulations, and inability of the Government to properly manage the road right-of-way. Weather and civil order problems, especially in remote areas, are also contributing factors to poor performance by the private contracting industry. However, the Operations Evaluation Mission noted that private contractors have the necessary equipment to enable them to meet the requirements of the sector.

14. The Association of Carriers and Equipment Lessors, the equipment hire sector of the industry formed in the mid-1960s, publishes a reference guidebook on equipment rental rates and terms, and the industry recognizes the value of using rental equipment in freeing capital and reducing underutilization of expensive equipment. DPWH has been reviewing policies on prequalification requiring equipment ownership by contractors, and some policies have been relaxed; for example, leased equipment is now acceptable. This further strengthens the ability of the contractors to meet the equipment requirements of the sector that may be associated with the eventual liquidation of BOE.

E. Conclusions

1. Key Issues

15. In spite of considerable progress in replacing the force account system with contracting out maintenance works, the major problem with the road sector remains inadequate budgetary allocations. According to a Better Roads Philippines study funded by the World Bank, a total of ₱13 billion was required in 1997 to meet road maintenance and rehabilitation needs, with ₱10 billion for routine and preventive maintenance. Only ₱4.2 billion was actually allocated (Table A2). The backlog of maintenance has since grown larger, as maintenance allocations have failed to keep pace with the requirements. In 2002, the budgeted allocation for maintenance has been ₱4.2 billion, of which 25% is still to be released. Because of serious fiscal constraints, the allocation may drop below ₱1.0 billion in 2003.

Table A2: DPWH National Roads and Bridges Program
(₱ billion)

Fiscal Year	Maintenance Allocation (General Budget)			Infrastructure (Capital) Program		
	Basic Maintenance ^a	Preventive Maintenance ^b	Total	Externally Assisted	Locally Funded	Total
1997	3.59	0.60	4.19	8.50	11.15	19.65
1998	3.70	0.60	4.30	11.86	14.73	26.59
1999	3.79	0.10	3.89	12.57	11.65	24.22
2000	4.34	0.80	5.14	13.66	8.22	21.88
2001	4.09	0.60	4.69	9.76	12.12	21.88
2002	4.08	0.16	4.24	13.13	5.93	19.06

DPWH = Department of Public Works and Highways.

^a Routine maintenance allocation based on equivalent maintenance kilometer (EMK) formula; in 2001, EMK allocation was ₱75,226 per kilometer (km); in 2002, ₱70,798 per km. For 2003, DPWH advised the Asian Development Bank that this may decrease to ₱15,921 per km or ₱0.85 billion total.

^b Excludes 2002 foreign components of ₱1.6 billion from the National Roads Improvement and Management Program, ₱1.14 billion from Sixth Road structural overlay, or ₱0.7 billion from the Special Road Support Fund or national road maintenance fund.

Source: DPWH.

16. The private sector still operates under conditions where access to credit is difficult. In addition, in remote and inaccessible areas private sector interest is minimal.

17. The Philippines has had experience with large public demonstrations, and there is concern that there may be organized opposition to the legislative/executive liquidation of BOE,⁸ even though negotiations between the concerned departments and BOE staff have begun in a constructive manner.

2. Overall Assessment

18. The TA is rated successful, as restructuring BOE as a commercial institution was thoroughly reviewed and liquidation was assessed as the most viable financial option. The process of liquidating BOE has begun.

a. Relevance

19. The TA is assessed highly relevant, as it addressed the need to rationalize DPWH in the aftermath of the policy of allocating a 70% share of maintenance contracts to the private sector.

b. Efficacy

20. The TA is rated efficacious, because its objective has been met.

c. Efficiency

21. The TA is assessed as efficient, since the consultants utilized their time and resources to concentrate on a severance package that would be acceptable to the employees.

⁸ Legislative action may entail changing the laws to allow large-scale retrenchment in a government agency; executive action may be required in the form of a presidential order, bypassing the need for legislative action.

d. Sustainability

22. The TA is likely to be sustainable. There is concern that the affected employees will mount protests, which may reverse the decision taken by the Government in mid-September 2002 to liquidate BOE. This does not seem likely at present, as dialogue between the relevant government departments and staff of BOE has already begun in a constructive manner (para. 17).

e. Other Impacts

23. The TA's other impacts are assessed as moderate, since BOE has not yet been liquidated and the government agreement to increase the private sector share to 75% of maintenance contracts has not yet been implemented (footnote 6).

3. Lessons Learned

24. A lesson learned is that ADB should consider a different implementation agency for sensitive TAs where liquidation of the designated agency may be an option to achieve the TA objective.

25. Where significant retrenchment is anticipated, TAs need to consider transitional arrangements, including change management and counseling, to minimize social costs of downsizing and layoffs.

26. In countries like the Philippines, where remote inaccessible areas render private interest minimal and where natural disasters are commonplace, some special contract arrangements and equipment resources need to be held by public works departments or contractors on a retainer basis for dealing with emergencies.

4. Recommended Follow-Up Action

27. No follow-up action is recommended.

EVALUATION OF TA 3004-PNG: ROAD ASSET MANAGEMENT SYSTEM AND TA 3378-PNG: ROAD ASSET MANAGEMENT SYSTEM IN THE PROVINCES

A. Background

1. Papua New Guinea (PNG) experienced difficulties in formulating policies and road infrastructure improvement plans to support maintenance and civil works due to the lack of reliable data on the length of the total road network or its condition. The MARESMAN Road Maintenance Management System, for scheduling maintenance works, used since 1986 in PNG, was ineffective as it assumed unconstrained budgets.
2. The Government of PNG requested assistance from the Asian Development Bank (ADB) to establish a road asset management system (RAMS) in its national and provincial networks to assist the relevant departments rationalize scarce resource allocation.

B. Rationale, Objectives, and Scope

3. The two technical assistance (TA) grants—one for the national network¹ and the other for the provincial network²—were provided on a stand-alone basis. Their main objective was to develop and operationalize an integrated RAMS that would provide (i) information on the physical condition of the roads and bridges over time, (ii) priorities for maintenance action, (iii) budget requirements and allocations for addressing priority needs, (iv) information on specific and periodic maintenance projects, (v) annual expenditure programs for routine and emergency maintenance, (vi) routine maintenance work schedules, and (vii) information on the service delivery performance of the road network.
4. The scope of TA 3004-PNG consisted of two parts. Part A included (i) implementation of the RAMS for national roads, including development of a planning framework for maintenance of national roads; and (ii) sustainable institutionalizing of the RAMS at the national level with related capacity building. Part B expanded the use of the RAMS to four pilot provinces, and TA 3378-PNG to the remaining 15 provinces.

C. Assessment of Implementation Performance

1. Design of the Technical Assistance

5. The two TAs enabled the Department of Works and Transport (DOWT)³ to develop a comprehensive system covering 20,000 kilometers of roads. However, design issues associated with the RAMS were identified by an ADB study⁴ that concluded that, oftentimes, the recipient countries sidelined the RAMS because of difficulties in maintaining the database. An international consultant team is still involved in operationalizing the RAMS in PNG, funded

¹ TA 3004-PNG: *Road Asset Management System*, for \$1 million, approved on 3 April 1998.

² TA 3378-PNG: *Road Asset Management System in the Provinces*, for \$581,000, approved on 28 December 1999.

³ A recent government reorganization has separated works and transport portfolios, but DOWT's organizational set-up has not changed yet.

⁴ ADB. 1999. *Road Funds and Road Maintenance, An Asian Perspective*. Manila. This study was prepared under TA 5871-REG: *Road Funds Strategy*, for \$350,000, approved on 2 December 1999, and it referred to risks associated with the RAMS, which included sidelining the RAMS by “starving it out of money, not updating the database, transferring trained staff, and allowing vehicles to be commandeered by unauthorized persons.”

under an ADB loan,⁵ and the risks identified by the ADB study may need to be dealt with in the future.

2. Engagement of Consultants

6. The Operations Evaluation Mission (OEM) confirmed that consultants for the two TAs were engaged in accordance with ADB's *Guidelines on the Use of Consultants*. An extension from the original 15 to 28 person-months was requested in TA 3378-PNG due to additional training requirements because full-time support from the assigned counterparts was not adequately provided. However, this was accommodated in the original budget.

3. Implementation Arrangements

7. DOWT acted as the Executing Agency for both TAs. TA 3004-PNG covered four pilot provinces whose inventory and methodologies were not established until the third quarter of 2000. This delayed TA 3378-PNG, which began only after work in the pilot provinces were completed. Hence, the sequencing of the two TAs was not appropriate, as TA 3378-PNG was approved at least 8 months prior to the expected completion of TA 3004-PNG and 15 months prior to its actual completion. ADB supervision was appropriate, and detailed back-to-office reports of review missions are available for both TAs.

D. Evaluation of Outputs and Impact

1. Adequacy and Quality of Consulting Services and Reports

8. The reports prepared under both TAs were adequate, and the services provided by the consultants were appropriate.

2. Training and Technology Transfer

9. TA 3004-PNG and TA 3378-PNG included training and seminars for the successful establishment of the RAMS in DOWT and provincial administrations.⁶ Training was provided at each stage of development, installation, and operationalizing of the RAMS. In addition, training was also provided in the preparation of feasibility analyses for projects identified in the first year of the program. Training was provided at headquarters only, as the RAMS is operated from there. The training provided was appropriate. In the initial stages of TA 3004-PNG, two counterpart staff moved to other agencies. This highlights the need to develop a broader pool of computer-literate DOWT staff capable of using and operating the RAMS.

3. Institution Building and Reform

10. DOWT has successfully established the RAMS, a maintenance planning system that utilizes surveys, computerized databases, and an economic analysis system. However, the Maintenance Coordination Services Branch, which houses the RAMS, has not been upgraded and continues as a branch headed by an assistant secretary. The OEM found that the surveys for the national road network were completed last year. Updating of survey data on a 3-year

⁵ Loan 1709-PNG: *Road Maintenance and Upgrading (Sector) Project*, for \$63 million, approved on 16 November 1999.

⁶ In addition, the Government is considering a plan to organize a study tour on best practice institutional arrangements for sustainable operation and management of the RAMS, supported by ADB.

cycle is being carried out in the national road network. Surveyed data has been received from about 50% of the provincial road network, and another 10% is anticipated by the end of 2002. Impediments to survey activity on the provincial network, and to a lesser extent on the national network, include lack of funding; lack of qualified technical staff; difficult terrain; and law and order problems, which intensified with the elections in 2002. The OEM found that provincial road survey work was carried out with national funds, and provincial commitment to the RAMS was weak. TA 3378-PNG envisaged establishing the RAMS units in the provinces under memoranda of understanding (MOU) between the provincial administrations and DOWT. Eleven MOUs had been signed at the time of the OEM. The consequent delays in the signing of the MOUs have been dealt with by extending support to the RAMS through the ongoing loan (footnote 5).

11. There are difficulties inherent in attempts to institutionalize change in the systematic management of the planning cycle through the establishment of a RAMS. The OEM noted that the RAMS plays an important role in planning and budgeting road maintenance activities in PNG. Government ownership at the national level is strong as senior government decision makers and politicians have endorsed the success of the RAMS as a means of introducing a new, more transparent approach to planning road maintenance that maximizes economic returns. In addition, civil organizations operating in the road sector endorse the systematic evaluation provided by the RAMS.

12. Constrained by staffing freezes imposed on the national public service since 2001,⁷ and the difficulty in obtaining permanent status for casual staff, DOWT headquarters has only a minimum complement of engineers and technicians for maintaining the national road database and applying a highway design model⁸ for optimization of the maintenance budget. As of September 2002, five permanent technical staff were assigned to the RAMS project, of whom four were engineers, including one expatriate. Two of the local engineers were responsible for the geographic information system and database, and one was proficient in the use of the model. The remaining permanent staff member was a senior technical officer responsible for survey and data collection. One more engineer was to be transferred from the Design Branch. Seven staff are considered the minimum for operating and updating the RAMS, but two of those assigned to the project are nonpermanent (casual) employees, responsible for data validation. Extension of the RAMS to the provincial works departments is hindered by the lack of full-time professional staff. At the time of the OEM's visit, each province was allocated two to three staff with one RAMS coordinator and one or two surveyors. In addition, the provincial administration allocates one staff member for this purpose, who often has two areas of responsibility, filling his/her regular job, as well as carrying out RAMS-related tasks. The problem of staffing is likely to continue as the pay differential between the private and the public sector widens.⁹ This leads to problems of retaining qualified staff in DOWT. In addition, data input through provincial offices has, so far, not led to any feedback from headquarters, which has reduced provincial commitment to the RAMS.

E. Conclusions

1. Key Issues

13. Despite general endorsement, the RAMS has not led to a significant increase in annual allocations for the road sector. Budget allocations have, on average, tended downward since

⁷ The staffing freeze is to continue until 2003.

⁸ A RAMS component.

⁹ An engineer in DOWT gets paid about K20,000 per year, while the private sector pays K25,000–50,000.

1999 and do not even cover the first priority work of routine maintenance. While the RAMS will continue to be a valuable planning and prioritizing tool—even under severe budget constraints—its value is lessened as the backlog of deferred maintenance grows. For 2001, total budgetary allocation for national road maintenance was less than 10% of the requirements, which were estimated at about K141 million. In addition, external agencies financed approximately K55 million for maintenance. For 2002, the maintenance budget allocation is K13 million, compared with a requirement of about K158 million. The Government is facing a severe cash crunch in the aftermath of the recent elections. This is likely to impact negatively on maintenance allocations.¹⁰ Table A3 notes the inadequacy of the allocations to meet the requirements.

Table A3: National Road Maintenance: Requirements and Domestic Expenditures
(K'000)

Fiscal Year	Required Estimate ^a	Domestic Expenditure	Shortfall ^b
1997	100,000	16,551	83,449
1998	100,363	25,745	74,618
1999	106,385	36,876	69,509
2000	120,000	14,800	105,200
2001	140,825	11,189	129,636
2002	158,258	6,501 ^c	

^a For FY1997 and FY1998, estimate based on average need per kilometer; for FY1999 and FY2002, requirements calculated by the road asset management system.

^b For FY2001 and FY2002, estimated external contribution to maintenance and rehabilitation was approximately K55 million.

^c Expenditure at mid-year.

Source: Department of Works and Transport.

14. Frequent changes in government with even more frequent changes in staffing in government offices, notably in DOWT, have raised issues of governance, sustainability, and continuity. Some of the civil works awarded by the Government do not pass through the bidding process. Furthermore, departments are frequently merged and then separated, which leads to disruption.

15. DOWT suffers from delays associated with (i) dealing with claims filed by private sector contractors (the present delay in payment is estimated on average at 3 months, ascribed partly to the present cash crunch faced by the Government and partly to problems associated with poor management); and (ii) filing of expenditure reports back to the concerned department by DOWT to initiate the release of further payment by the Ministry of Finance. The issue of the delay in payment between commitments made by a department and the resulting invoice sent to the Ministry of Finance is a source of concern and has led to delays in the release of payments by the Ministry of Finance.

16. The bidding process continues to be lengthy and complex despite efforts to improve it. Private sector contractors informed the OEM that delays could be from 3 months up to a year. There was additional concern about the bidding documents not being adequate in terms of description of the work to be undertaken.

¹⁰ ADB has engaged with the PNG Government in setting up a road fund to finance maintenance under two TAs: (i) TA 3191-PNG: *Road Sector Cost Recovery Improvement*, for \$350,000, approved on 6 May 1999; and (ii) TA 3716-PNG: *Road Authority Development*, for \$700,000, approved on 11 September 2001.

17. The increasing differential between government and private salaries will make retention of qualified staff difficult (para. 12).

2. Overall Assessment

18. TA 3004-PNG is rated successful. The RAMS has been established for the national road network, and 11 provinces have signed the MOUs. It assists in maintenance planning and programming. However, with low maintenance allocations, the road network continues to deteriorate, requiring major rehabilitation work.

19. TA 3378-PNG is rated partly successful as not all the provinces have joined the program and, accordingly, are not yet receiving RAMS data. However, with survey work proceeding as planned and with strong national government commitment, it is more than likely that the provincial governments will be brought on board and the TA will be more successful over time.

a. Relevance

20. TA 3004-PNG and TA 3378-PNG were highly relevant in both providing a planning and budgeting tool and improving the credibility of DOWT budget submissions.

b. Efficacy

21. TA 3004-PNG is rated efficacious, as the RAMS has been installed and is in use. However, TA 3378-PNG is rated less efficacious, as only 11 of the 19 provinces have signed copies of the MOU, and there are no full-time RAMS coordinators at the provincial level.

c. Efficiency

22. TA 3004-PNG is rated efficient, as the consultant input was vital in establishing the RAMS. TA 3378-PNG was a continuation of TA 3004-PNG, and deepening the use of the RAMS to the provinces is an efficient use of this planning tool. However, the second TA is rated less efficient, with provincial staff getting no feedback from national headquarters after they submit surveys.

d. Sustainability

23. There is client ownership in TA 3004-PNG at the level of the national Government, though there is weaker ownership at the provincial level. However, there are considerable risks associated with operating the RAMS related to (i) provision of adequate and reliable funding for road maintenance; (ii) institutionalization of the RAMS and client credibility at the budget and work program levels; (iii) monitoring of provincial maintenance performance compared with the RAMS work program; (iv) DOWT recognition of the RAMS and maintenance programming function through elevation of maintenance coordination services; (v) assignment of trained and qualified staff senior engineers for each region to oversee the RAMS; (vi) consistent annual updates of condition and traffic surveys; (vii) continued training for DOWT headquarters staff and provincial staff; and (viii) managerial and technical resources dedicated to the RAMS at the headquarters and provincial levels. In addition, there are risks associated with lesser trafficked roads receiving little or no maintenance funding and encouraging provinces to inflate traffic counts to justify funds. Therefore, the long-term sustainability of TA 3004-PNG is rated less

likely. Sustainability of TA 3378-PNG is also assessed as less likely for the same reasons plus the fact that, at present, only 11 of 19 provinces are part of the program.

e. Other Impacts

24. Other impacts of TA 3004-PNG are assessed as moderate, as there has been no significant impact on the actual budget allocations for the road sector even though there is appreciation of the credibility of the RAMS analysis. TA 3378-PNG is also assessed as moderate in this regard for the same reasons as TA 3004-PNG. However, provincial implementation of the RAMS is still in progress under another ADB loan (footnote 5), an additional reason for rating TA 3378-PNG as moderate.

3. Lesson Learned

25. Implementing and sustaining the RAMS requires long-term involvement by the Government.

4. Recommended Follow-Up Actions

26. There is a need for continued support to the RAMS and a follow-up over a period of 5 or more years to maintain momentum. There is also a need to train sufficient staff to provide a backup at headquarters, but attracting qualified staff to DOWT may remain a problem unless public service salaries are made more competitive. It is suggested that recruitment to ensure adequate backup for the seven staff members at DOWT be carried out by the end of 2004.

27. To increase and sustain interest in the provinces, RAMS headquarters needs to give prompt feedback once provincial data has been submitted. Furthermore, there is a need to have a full-time provincial coordinator by 2004.

LOGICAL FRAMEWORK OF THE TAs

Item	Objectives	Planned Targets	Actual Outputs
Overall Sector Goal To assist in strengthening management of road sector institutions	Ensure that scarce resources are used optimally	Different targets for different technical assistance (TA) grants	<ul style="list-style-type: none"> ▪ Initial steps achieved; however, progress is slower than anticipated; continued support will be necessary
Purpose and Outputs TA 1897-LAO	<ul style="list-style-type: none"> ▪ Support for privatization of road sector enterprises ▪ Management of road sector institutions 	<ul style="list-style-type: none"> ▪ Remaining state enterprises in road construction and transport sector privatized ▪ Management assistance to already privatized road transport companies provided ▪ Road Act enacted 	<ul style="list-style-type: none"> ▪ Privatization proceeding slowly ▪ Workshops and training materials provided ▪ Road Act was passed in 1999 and implemented in 2000
TA 2652-PHI	<ul style="list-style-type: none"> ▪ Determination of optimum strategy for managing operation of the Bureau of Equipment (BOE) and Regional Equipment Services plant, equipment, and workshops ▪ Identification of constraints inhibiting development of private contracting industry 	<ul style="list-style-type: none"> ▪ Options for management and operation of workshops and equipment, including privatization of equipment services, identified ▪ Construction industry review and workshop/seminar conducted 	<ul style="list-style-type: none"> ▪ Cabinet decision mid-September 2002 to liquidate BOE ▪ Workshop held with industry, Department of Public Works and Highways, and Asian Development Bank participation; Philippine Constructors Association Incorporated sponsoring some training for contractors; Association of Carriers and Equipment Lessors continues to operate; equipment requirements able to be met from private sector
TA 3004-PNG	<ul style="list-style-type: none"> ▪ Implementation of road asset management system (RAMS) as planning and prioritizing system 	<ul style="list-style-type: none"> ▪ RAMS for national road network established 	<ul style="list-style-type: none"> ▪ RAMS established on national road network
TA 3378-PNG	<ul style="list-style-type: none"> ▪ Extension of the RAMS to provinces 	<ul style="list-style-type: none"> ▪ RAMS for provincial network established 	<ul style="list-style-type: none"> ▪ Eleven of 19 provinces have signed memoranda of understanding to implement the RAMS; surveys still under way

Source: Operations Evaluation Mission.