

ASIAN DEVELOPMENT BANK

TAR:OTH 36661

TECHNICAL ASSISTANCE
FOR THE
PACIFIC REGIONAL TRANSPORT ANALYSIS

January 2004

ABBREVIATIONS

ADB	–	Asian Development Bank
PDMC	–	Pacific developing member country
TA	–	technical assistance

NOTE

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

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I. INTRODUCTION

1. The Pacific Department proposes technical assistance (TA) funding support on a grant basis from the Asian Development Bank (ADB) for a regional TA to conduct an analysis of regional and national operations in aviation, shipping, and road transport services.¹

2. This TA aims to improve the efficiency and effectiveness of transportation services by developing consensus on regional and national sector road maps for reform of public sector operations and policies and increased private sector participation in service provision, leading to increased economic development in the Pacific region. The TA framework is in Appendix 1.

3. Improving transportation services to support private sector growth and rural development has been an enduring feature of ADB's dialogue with Pacific developing member countries (PDMCs) and is an objective in 11 of the 13 country strategies and programs. Numerous field missions and previous regional TAs (Appendix 2) undertaken in PDMCs have established the required basis for this proposal.² This TA is included in ADB's Pacific Regional Cooperation Strategy and Program 2003-2008.

II. ISSUES

4. The 13 PDMCs are widely dispersed over a large geographic area and differ widely in size, population, endowments, opportunities, and development constraints. A total regional population of about 8 million inhabit a landmass of about 500,000 square kilometers (km²) separated by vast distances across an ocean area of about 30 million km². No two PDMCs share a common land boundary. The region is therefore dependent on air and sea transport for passengers and freight to a much greater extent than most ADB member countries.

5. Much of the Pacific region's economic growth potential relies on improved connectivity through efficient and effective transport services. Tourism and high-value exports (such as tuna for the sashimi market) depend on improved aviation. Export of commodities and high reliance on imports translate into extensive dependence on international shipping. Access of rural populations to international and domestic markets for their produce is determined through road transport and interisland shipping services. Yet improvements to transport networks and services in the Pacific region face many unique challenges.

6. Travel between PDMCs is constrained by high airfares and cargo tariffs for sparse services, while underdeveloped road networks and unreliable interisland shipping hamper travel within each country. It is common for capital cities to be linked by only one or two flights per week, with airfares between PDMC capitals that are often twice as high as those to metropolitan countries on a per-mile basis. Outer islands have few, if any, roads and are commonly called on by cargo ships once or twice a month, with frequent service suspensions.

7. High transport costs and poor schedules adversely affect prices and terms of trade in PDMCs, as these small, vulnerable, and generally resource-poor island economies rely on imports and face difficult access to domestic and international markets for their exports. Rural producers cannot reliably supply their markets under typical conditions, and when they do, the prices they face for both inputs and outputs are adversely affected. Difficult transportation is

¹ The TA first appeared in *ADB Business Opportunities* (Internet edition) on 20 November 2003.

² There has been no additional fact-finding mission specifically for this RETA.

also in part responsible for poor economic integration and low levels of intra-Pacific trade that are less than 5% of the total trade of the region.

8. As a result of these challenges, rural-urban linkages, domestic trade, and export of primary commodities cannot contribute fully to national economic growth. Yet improvements to the transportation system would support growth in private investments, employment generation, commerce and trade, local business development, export of goods and services, reduction in consumer prices, and consequently, poverty reduction.

9. The current government-dominated environment for service provision shapes the potential for improvements. Public management of transport policies and assets significantly affects the provision and efficiency of both public and private transport services, as public sector operations, institutions, regulations, and incentives established under the policy frameworks determine transport markets, and either support or constrain competitiveness.

10. Aviation and shipping services in the Pacific are dominated by publicly owned enterprises, which are often monopoly operators. This is in part due to the nature of very small markets, which make it difficult for multiple providers to gain entry and achieve the necessary scale to become commercially viable. In some cases, monopoly operators may represent the optimal structure, where traffic and cargo volumes are too small to sustain multiple providers. In other cases, the private sector may be able to operate more efficiently, either in direct competition or in a serially contestable market with public sector operators.

11. Private sector participation in transport services can be enhanced through documentation of direct (e.g., fares and tariffs) and indirect (e.g., delays and maintenance) logistics costs, analysis of market structures and opportunities, identification of constraints including sector regulations and management practices of state-owned operators, and recommended improvements to the enabling environment for investments and service operations. Even in small markets where competition between multiple providers is not easily commercially viable, market contestability can be introduced through regular tenders for management contracts or lowest-cost route-specific subsidies.

12. The transport sector strategy of ADB's Pacific Regional Cooperation Strategy and Program 2004-2006 includes a review and assessment of the constraints to efficient operations in the region as one of its four focus areas. It also recognizes that inefficiencies and deficiencies in policy and regulatory frameworks, public management of infrastructure assets, and other public procedures provide inadequate incentives for private sector participation.

13. ADB has a long-established interest in fostering sector improvements and Pacific regional cooperation, focused primarily on infrastructure investments and institutional strengthening for public sector planning and management, with some attention given to improving several existing national operators.

14. In the aviation sector, much of this assistance has focused on expanding and improving existing airport facilities. ADB has addressed aviation sector needs with eight TA projects (\$2.6 million) for feasibility studies for upgrading domestic airports, institution building including improvement of the financial management systems of international airports, reform and training to improve airport safety, air traffic control, and financial feasibility for cooperative safety and security oversight. ADB assistance to the shipping sector has been delivered through 19 TAs that focused on infrastructure for ports and shipyards, including one institutional assessment and four national shipping services assessments. ADB assistance to the road transport sector

has been delivered through 12 TAs that focused mainly on road infrastructure, including one safety and traffic management assessment. The specific TA projects are listed in Appendix 1.

15. The only TA to specifically address regional aviation service provision (TA 5682-REG) noted significant market failures and called for long-term support from ADB. No TA has examined the performance of the overall regional transport system in providing transport services across land, sea, and air, and very few have analyzed methods to enhance private sector provision of such services. However, it is significant that ADB's recent regional private sector assessment for the Pacific region³ calls for enhanced participation and competition in providing transport service.

16. There are no recent or ongoing assessments or projects by other aid agencies at the regional level in the Pacific similar to this proposal. The most recent World Bank analysis, the Pacific Islands Transport Sector Study in 1993, focused on existing (mostly public) air and sea carriers and did not examine opportunities for greater private sector participation. The ongoing ADB study Assessing the Impact of Transport and Energy Infrastructure on Poverty Reduction (TA 5947) cofinanced by the World Bank and Japan Bank for International Cooperation, makes no distinction between public and private sector provision of transportation services and uses four Asian countries for its case studies. The European Union funded a two-phase Pacific Regional Civil Aviation Communications Project between 1993 and 2003 that provided airport equipment but did not analyze service provision. However, a forthcoming study proposed by the Australian Agency for International Development for 2004 will examine opportunities for improved cooperation and pooling of existing resources for regional and subregional air and sea services. Though it is not expected to produce a definitive program portfolio, it may catalyze a constituency for reform.

17. This TA will add to existing knowledge and complement work undertaken by ADB and others by analyzing the transport system as an integrated whole, extending the analysis to reform of public sector agencies and operators, and improving the climate for private sector participation. It will also complement an upcoming project work by laying a foundation for service provision to make optimal use of the infrastructure as it is developed.⁴

18. By developing sector road maps with solid stakeholder acceptance, the TA will create an enabling environment for future domestic and international direct investment and private sector development. By enhancing the efficiency and effectiveness of transportation services in PDMCs, direct and indirect logistics costs should decrease and economic production and employment should increase, leading directly to positive impacts on poverty. In addition, extensive use of domestic consultants will build the local capacity for transportation analysis and planning.

III. THE TECHNICAL ASSISTANCE

A. Purpose and Output

19. The TA seeks to enhance economic development in PDMCs. That goal will be achieved by improving the efficiency and effectiveness of transportation services through reform of public

³ ADB. 2003, *Swimming Against the Tide: An Assessment of the Private Sector in the Pacific Region*. Manila. (TA 6037-REG).

⁴ In particular, outer island transport infrastructure in Federated States of Micronesia and Marshall Islands, improvements to publicly-run interisland shipping services in Solomon Islands and Papua New Guinea, airport improvements in Fiji Islands, and the ongoing study of regional cooperation in aviation safety and security.

sector operations and policies and increased private sector participation in service provision. These improvements will directly reduce the costs of trade and commerce and increase employment, and indirectly reduce the costs of consumer goods, thereby reducing poverty.

20. The output will be consensus on an effective and coordinated program to support economic development, in the form of sector road maps at regional and national levels. Consensus will be achieved by undertaking a systematic and participatory analysis of the constraints to efficient transport markets and identifying pragmatic programs to remove them. The TA will develop a range of options and involve a variety of participants, including funding agencies and private sector participants, in assessing its findings and identifying ways to implement the necessary programs.

B. Methodology and Key Activities

21. The TA methodology is intended to produce a fundamental understanding of the efficiency and effectiveness of public and private sector transport services, constraints to their development, and strategies for their improvement.

22. Key activities are (i) assessing the logistics costs of the current transport sector by collecting and analyzing data; (ii) analyzing of market structures including public and private sector operators, policies, and regulations governing services; (iii) identifying the impacts of market structure and constraints to improvement and expansion of efficient transport services; (iv) recommending improvement to public sector operations, private sector participation, and regional cooperation; and (v) analyzing, building consensus, and disseminating of results through direct consultations and workshops with relevant stakeholders, reports to ADB, and a final publication.

23. Through these activities, the TA will determine the efficiency of transport services and infrastructure and the relative importance of each transport mode in reducing transport costs in the region. The TA will seek to identify innovative approaches to service provision and to improve the effective functioning of markets, by removing regulatory constraints and promoting contestable market solutions that are appropriate to small Pacific economies. An enabling environment will induce private transport services and asset management, and improvement in sector efficiency. The TA will outline pragmatic programs to enhance the productivity of infrastructure, policy, and transport operations; and determine opportunities for expanding the role of the private sector.

24. The TA will prepare reports that will be discussed in two regional workshops involving consultations at three levels: (i) consultation among ADB and PDMCs on TA administration, outputs, and achievements; (ii) consultative meetings with stakeholders to consider progress achieved and views and options presented under the TA inception, progress, midterm, and draft final reports; and (iii) meetings convening aid agencies supporting the transport sectors in the Pacific region. The first workshop will be a midterm peer review workshop, at which the analyses of market conditions and structures will be presented, and feedback solicited on the identified impacts and constraints. The second workshop will be a sector road map and program portfolio workshop, at which the recommendations for improvements will be presented, and feedback solicited on the feasibility and desirability of the suggested approaches.

25. This process relies on in-depth country focus and comparative examination of impacts of constraints, creation of regional benchmarks, and adaptation of best practices from within and

outside the region. Much of the country-specific information will be developed by domestic consultants, thereby building the capacity for analyzing and planning local transportation.

26. The TA aims to develop consensus at regional and national levels on sector road maps containing program portfolios, and to identify resource requirements and sources of financing to implement the proposed programs. Outputs of the TA will be published to establish a compendium that can guide private operators, investors and financiers, PDMC governments, funding agencies, and other parties interested in transport operations in the Pacific region.

C. Cost and Financing

27. The total cost of the TA is estimated at \$467,000 equivalent. The TA will be financed on a grant basis by ADB's TA funding program. Detailed cost estimates are in Appendix 3.

D. Implementation Arrangements

28. Consulting services (33 person-months: 9 international and 24 domestic) in aviation, shipping, and road transport planning and economics are required, and will be utilized intermittently over 2 years. Individual consultants will be engaged in accordance with ADB's *Guidelines on the Use of Consultants*. Outline terms of reference for the consultants are in Appendix 4.

29. ADB will be the Executing/Implementing Agency. ADB's Pacific Department will be responsible for the overall and day-to-day monitoring of TA activities. Transport agencies in the PDMCs will be counterpart agencies to the study. ADB will also coordinate the TA with regional transport organizations, including the Pacific Islands Forum Secretariat and the transport division of the United Nations Economic and Social Commission for Asia and the Pacific.

30. The TA will be implemented over 2 years, starting in June 2004 and ending in May 2006. The consultants will submit inception, quarterly progress, draft final, and final reports. The consultants will organize two workshops with stakeholders, including governments and industry representatives. The first will be a peer review workshop to assess the data collection and analysis phase of the project. The second will be a program portfolio workshop, held to assess the policy and operational recommendations that are expected.

IV. THE PRESIDENT'S DECISION

31. The President, acting under the authority delegated by the Board, has approved the provision of technical assistance not exceeding the equivalent of \$467,000 on a grant basis for a Pacific Regional Transport Analysis, and hereby reports this action to the Board.

TECHNICAL ASSISTANCE FRAMEWORK

Design Summary	Performance Indicators/Targets	Monitoring Mechanisms	Assumptions and Risks
<p>Goal Increased economic development in Pacific Developing Member Countries (PDMCs)</p>	<p>Increasing economic growth rate</p> <p>Decreasing poverty incidence</p>	<p>Country economic reports</p> <p>Household income and expenditure surveys</p>	
<p>Purpose Improve the efficiency and effectiveness of transportation services through reform of public sector operations and policies, and increased private sector participation</p>	<p>Passenger fares and cargo tariffs decrease toward international benchmarks</p> <p>Increased frequency of scheduled services</p> <p>Greater numbers of new entrants providing services</p>	<p>CSPU and sector review missions</p> <p>PDMC requests for lending and TA to support reforms and investments</p> <p>Private sector assessments</p>	<p>Governments are willing to implement reform programs.</p> <p>Market conditions support new entrants.</p>
<p>Output Consensus at regional and national levels on sector road maps</p>	<p>Acceptance of proposed sector road maps by PDMCs</p>	<p>TA reports detailing the outcomes and decisions from peer review and portfolio workshops</p>	<p>National positions converge on sector reform and regional road maps.</p>
<p>Activities (i) Assess cost structures of transport services and efficiency of markets (ii) Document and analyze markets, including constraints to competitive sector management (iii) Identify and explore constraints and quantify the consequent impacts (iv) Recommend policy and regulatory improvements to eliminate the constraints and improve efficiency</p>	<p>Sufficiently clear and usable data and descriptions that facilitate creation of regional benchmarks and comparisons within and between countries</p> <p>Feasible recommendations within the regional and national contexts</p>	<p>TA reports</p> <p>PDMC feedback from peer review and portfolio workshops</p> <p>Project monitoring missions</p> <p>Final publication</p>	<p>(i - ii) Adequate data are available for the required analysis.</p> <p>(i-ii) Government agencies and transport operators cooperate.</p> <p>(iii-iv) Benchmarks and international best practices are applicable to Pacific context.</p> <p>(iv-v) Key staff and stakeholders are available for workshop participation.</p>

Design Summary	Performance Indicators/Targets	Monitoring Mechanisms	Assumptions and Risks
(v) Disseminate findings among private / public stakeholders and funding agencies.			
Inputs (i) 9 person-months international consultants (ii) 24 person-months domestic consultants		ADB disbursement records	Sufficiently qualified consultants are available.

PREVIOUS ADB TECHNICAL ASSISTANCE IN THE PACIFIC TRANSPORT SECTOR

Aviation

- TA 0011-SAM: Faleolo Airport and Road Development, for \$50,000, approved on 19 February 1969
- TA 5598-REG: Regional Training Course on Airport Operations and Management, for \$190,000, approved on 7 October 1994
- TA 5610-REG: Pacific Airports Project Facility, for \$600,000, approved on 21 December 1994
- TA 5682-REG: Pacific Airlines Rationalization, for \$600,000, approved on 22 April 1996
- TA 2536-TUV: Study on Domestic Civil Aviation, for \$100,000, approved on 22 February 1996
- TA 5928-REG: Cooperative Management of Airspace in the Pacific, for \$350,000, approved on 25 August 2000
- TA 4099-FIJ: Civil Aviation and Airports Improvement, for \$710,000, approved on 25 April 2003.
- TA 6119-REG: Regional Civil Aviation Safety and Security, for \$150,000, approved on 25 August 2003

Shipping

- TA 0207-FIJ: Suva Port Development, for \$92,000, approved on 17 October 1977
- TA 0406-FIJ: Lautoka Port Development, for \$100,000, approved on 23 July 1981
- TA 2321-FIJ: Transport Sector Institutional Strengthening, for \$600,000, approved on 12 April 1995
- TA 0553-FIJ: Suva Shipyard Improvement, for \$215,000, approved on 17 November 1983
- TA 0752-FIJ: Privatization of Government Shipping Fleet and Commercialization of Government Shipyard, for \$346,500, approved on 2 January 1986
- TA 3199-FIJ: Port Asset Management Improvement, for \$250,000, approved on 31 May 1999
- TA 0169-KIR: Interisland Shipping, for \$50,000, approved on 14 June 1978
- TA 0519-KIR: Betio Shipyard Improvement, for \$225,000, approved on 2 June 1983
- TA 0647-KIR: Betio Shipyard Rehabilitation, for \$290,000, approved on 13 December 1984
Betio Shipyard Rehabilitation (supplementary), for \$60,000, approved on 6 May 1986
- TA 1217-KIR: Inter-Island Transport Development Study, for \$285,000, approved on 10 November 1989
- TA 3506-RMI: Outer Island Transport Infrastructure, for \$340,000, approved on 29 September 2000
- TA 4004-RMI: Improving the Delivery of Sea and Air Transport Services, for \$250,000, approved on 28 November 2002
- TA 0284-PNG: Lae Port Development, for \$150,000, approved on 6 March 1979
- TA 0473-PNG: Port Development Study, for \$250,000, approved on 29 July 1982
- TA 1077-PNG: Second Ports Development, for \$350,000, approved on 2 December 1998
- TA 3162-PNG: Rehabilitation of the Navigations Aids System, for \$500,000, approved on 1 February 1999
- TA 3619-PNG: Rehabilitation of the Maritime Navigation Aids System, for \$800,000, approved on 19 December 2000
- TA 3615-PNG: Community Water Transport Project, for \$580,000, approved on 21 December 2000
- TA 1525-VAN: Interisland Shipping Study, for \$525,000, approved on 21 June 1991

Roads

- TA 3401-ETM: Transport Sector Restoration, for \$1,000,000, approved on 10 February 2000
- TA 3731-ETM: Transport Sector Improvement, for \$500,000, approved on 1 October 2001
- TA 0667-FIJ: Road Upgrading, for \$150,000, approved on 31 January 1985
- TA 1046-FIJ: Road Upgrading, for \$250,000, approved on 3 January 1989
- TA 1716-FIJ: Road Safety and Traffic Management, for \$150,000, approved on 18 June 1992
Road Safety and Traffic Management (supplementary), for \$70,000, approved on 18 June 1997
- TA 2251-FIJ: Third Road Upgrading, for \$600,000, approved on 20 December 1994
- TA 2850-FIJ: Road Sector Reform and Safety Improvement, for \$1,400,000, approved on 26 August 1997
- TA 1174-PNG: Road Transport Sector Profile, for \$100,000, approved on 11 July 1989
- TA 3037-PNG: Road Upgrading and Maintenance, for \$750,000, approved on 2 July 1998
- TA 3717-PNG: Southern Road Maintenance and Upgrading, for \$400,000, approved on 11 September 2001
- TA 0109-TON: Road Improvement and Maintenance Study, for \$130,000, approved on 7 May 1974
- TA 0965-VAN: Preparation of a National Transport Development Plan, for \$350,000, approved on 28 March 1988

COST ESTIMATES AND FINANCING PLAN^a
(\$'000)

Item	Total Cost
1. Consultants	
a. Remuneration and Per Diem	
i. International Consultants	202.5
ii. Domestic Consultants	66.5
b. International and Local Travel	45.0
c. Reports and Communications	30.0
2. Training, Seminars, and Conferences	
a. Midterm Peer Review Workshop	40.0
b. Final Program Portfolio Workshop	40.0
3. Miscellaneous Administration and Support Costs	3.0
4. Contingencies	40.0
Total	467.0

^a Financed by ADB's technical assistance funding program.
Source: Asian Development Bank estimates.

OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

A. Objectives and Scope

1. The overall goal of consulting services is to develop consensus on ways to improve the efficiency of transportation services in the Pacific region that will lead to better pricing structures for exports and imports, improved conditions for private investment, greater employment generation, and subsequently poverty reduction. The objectives are to (i) assess the structure, market conditions, and policy environment of transport services; and (ii) make recommendations for improving the prevailing transport markets.

2. The technical assistance (TA) will cover the dominant transport modes in the Pacific: road, shipping, and aviation, including intermodal linkages. It will encompass (i) assessment of direct and indirect logistics costs of each transport subsector; (ii) analysis of market structures including public and private sector operators, policies, and regulations; (iii) identification of the impacts of market structure and constraints to improvement and expansion of efficient services; (iv) recommendations for improving public sector operations, private sector participation, and regional cooperation; and (v) development of analyses and dissemination of results through direct consultations and workshops with relevant stakeholders, reports to the Asian Development Bank (ADB), and a final publication.

B. International Consultants (9 person-months)

3. Three individual international consultants will be engaged for 3 person-months each, intermittently over a 2-year period, to conduct the primary analyses and develop recommendations for improving the aviation, shipping, and road transport subsectors. The TA will cover urban, rural, interisland, and regional transport services. The terms of reference for an aviation specialist, shipping specialist, and road transport specialist will include, but will not be limited to, the following tasks:

(i) Assess logistics costs

- a) Supervise data collection by domestic consultants; review and examine available data; identify needs for further analysis and data collection; and develop new or updated data on logistics costs related to the relevant subsector.
- b) With quantitative and qualitative data, develop comprehensive descriptions of current domestic and regional services, costs, prices, market structure, and sector conditions in Pacific developing member countries (PDMCs).
- c) Compile and examine direct and indirect cost components of transport service delivery on both national and cross-country comparative bases, in sufficient detail to develop recommendations to improve infrastructure, policy, and operations.
- d) On the basis of an initial assessment of data availability and quality, select three countries for further detailed analysis under the following tasks ([ii] – [iii]) in order to produce maximum useful diversity and potential for generalization in terms of structures, constraints, and potential recommendations for improvement.

(ii) Analyze market structures

- (a) With standard and internationally acceptable analytical methods, examine all data to determine efficiency in service delivery and produce a comparative evaluation of sector competitiveness and productivity among Pacific countries.

- (b) Assess the cost and price structures of both public and private sector transport services in the Pacific countries.
 - (c) Describe and quantify to the extent possible the current balance of services provided by public and private sector operators.
 - (d) Identify and assess the success of innovative approaches to service provision, including but not limited to public-private partnerships, domestic or international direct investment, service concessions, and corporatization of public agencies.
 - (e) Determine public policies, regulations, and plans affecting the costs of operation and provision of current and potential transport services.
- (iii) Identify impacts and constraints
- (a) Determine how market structures, including those related to public sector operations, finance, management, infrastructure, policies, and regulations affect the costs and prices of service provision.
 - (b) Identify and, where possible, quantify elements of market structures causing or contributing to inefficiencies and market failures, including undesirable public sector practices and regulatory or other constraints to competition.
 - (c) Identify constraints to market entry of private sector operators.
- (iv) Develop recommendations for improvement
- (a) Compare the analyses of service provision and market structure to international best practices, particularly those appropriate for small isolated markets; identify areas for improvement in the case study countries; and extrapolate lessons to other PDMCs.
 - (b) Develop recommendations for mitigating the negative impacts and removing the constraints identified in existing Pacific transport market structures.
 - (c) Assess the scope for enhanced private sector participation in all aspects of the sector across the region, including service provision and asset management.
 - (d) Make recommendations to improve the effective functioning of markets and to provide services at the least cost across the region. Assess the feasibility of alternative mechanisms to create contestable markets including, but not limited to, liberalization of regulations, public-private partnerships, management contracting of public assets and operations, auctions of service concessions, minimum subsidy tendering for commercially nonviable but essential service routes, and asset and service sharing or other forms of regional cooperation.
 - (e) Develop national and regional sector road maps covering potential portfolios of programs and policy reforms for consideration by stakeholders who have control over the factors needing improvement, and consult on the formulation of support mechanisms to implement the recommended improvements.
- (v) Conduct consultations and disseminate results
- (a) Prepare draft and final reports (paragraphs 9-10) on the resulting findings and recommendations, covering the developed databases, comparative analyses, and recommendations with appropriate description and references for effective use by governments, the private sector, investors and financiers, aid agencies, and interested partners in developing transport operations in the Pacific region.

- (b) Conduct two regional workshops (paragraphs 5-8), in consultation with governments, private sector stakeholders, and relevant regional organizations to obtain feedback on the TA findings and to develop program portfolios.
- (c) Prepare a publishable version of the final report, including critical analyses, to assist in developing consensus on the strategies required to improve the efficiency of the Pacific transport sector. The publication should include analysis of the broad impacts of the transport sector on economic development and commerce, trade, investment, and employment in Pacific island countries.

C. Domestic Consultants (24 person-months)

4. About 3-6 domestic consultants (depending on the recommendation of the international consultants) will be engaged for 2-4 person-months each, intermittently over a 2-year period, for primary data collection and compilation, preliminary description and analysis, and research coordination. One additional domestic consultant will be recruited as a research coordinator to be based at ADB headquarters for 12 months, intermittently over a 2-year period. The terms of reference for the domestic consultants will include, but will not be limited to, the following tasks:

- (i) Data collection
 - (a) Acquire, compile, and assess the accuracy of all available national data on transport services provided by the public and private sectors.
 - (b) Acquire, compile, and assess the accuracy of all available data on regional transport services affecting the country of consideration.
 - (c) With formats provided by the international consultants, prepare quantitative and qualitative databases that describe as completely as possible existing operations, costs, prices charged, infrastructure, regulations affecting services, and descriptions of market structure.
 - (d) Obtain all relevant public sector development plans, policies, and regulations required for analyzing market structures.
- (ii) Preliminary analysis
 - (a) Based on an assessment of available data, recommend to the international consultants additional data collection that may be required to complete the necessary descriptions and facilitate analyses of the transport sector.
 - (b) Identify innovative approaches to service provision - public-private partnerships, service concessions, and corporatization of public agencies - that may warrant further investigation and documentation.
 - (c) Prepare initial reports and other materials for consultations and workshops.
- (iii) Research coordination
 - (a) One domestic consultant to conduct desk and Internet-based research at ADB headquarters and coordinate the activities of data collection and reporting of the team, ensuring that results are in consistent formats.
 - (b) Be responsible for maintaining all national and regional documentation that is acquired during the TA.
 - (c) Be responsible for monitoring and, when necessary, facilitating project communications between team members, governments, private sector stakeholders, and regional organizations.

D. Workshops

5. The consultants will carry out the TA in consultation with relevant stakeholders including public sector agencies and operators, private sector participants, industry groups, and regional organizations. The consultations are intended to improve the quality of the national analyses as well as to disseminate results and develop consensus on the recommendations.

6. Two workshops will be convened during the course of the TA. The first workshop will be a midterm peer review workshop, at which the consultants will present the results of their analyses of market conditions and structures, and solicit feedback on the identified impacts and constraints. The second workshop will be a sector road map and program portfolio workshop, at which the consultants will present recommendations for improvement, and solicit feedback on the feasibility and desirability of suggested approaches. The consultants will prepare and circulate records of the workshops, and incorporate comments in the reports and activities.

7. The content and conduct of the workshops will be the responsibility of the international consultants. Domestic consultants will prepare preliminary material as inputs. The domestic consultant residing in the country of the workshop may be asked to assist with facilitation. The research coordinator will organize workshop logistics from ADB headquarters.

8. In parallel with the workshops, the international consultants will organize a minimum of two consultation meetings with ADB on TA administration, outputs, deliverables, and TA achievements. In connection with these meetings, the consultants will arrange meetings with other aid agencies operating in the sector. The consultants will prepare and circulate minutes of the meetings, and incorporate comments in the reports and activities, as appropriate.

E. Reports and Publication

9. The consultants will submit the following reports in English to ADB for distribution (13 copies for distribution and 3 for ADB):

- (i) **Inception report.** This brief report will be submitted within 4 weeks of the start of the TA. It will outline, in accordance with the terms of reference, the consultants' approach, methodology, and work plan, as well as cost implications for consulting services. The report will provide a clear bar chart of all activities under the TA, and recommend changes to the implementation arrangements, and a list of equipment to be procured as required.
- (ii) **Quarterly progress reports.** These brief reports will inform ADB of achievements under each item of the terms of reference; identify, if any, emerging difficulties in implementation, and outline proposed solutions. The reports will clearly present the status of implementing the terms of reference, performance status, and personnel schedule with accomplishments under each item of the terms of reference, as well as plans for the next month's work. The reports will adopt a uniform format facilitating monitoring and will update the bar chart on all activities under the TA.
- (iii) **Midterm report.** This report to be submitted in midpoint of TA implementation will be the major input to the first workshop. The report will take the format of the draft final and the final report and will be considered a precedent version of the publishable final report. It will summarize all recommendations and concepts

developed under the terms of reference, up to the submission date. It will also provide a detailed background to the sector and identify issues and decision-making requirements, if any, to facilitate TA progress.

- (iv) **Draft final report.** This report to be submitted on completion of the TA will be of publishable quality. It will provide the following: (a) summary of the TA activities; (b) data collected, data analysis, and comparative analyses; (c) stakeholder assessments; (d) recommendations, as per the terms of reference; (e) portfolios of improvement programs; and (f) conclusions.
- (v) **Final report.** The consultants will submit this report 1 month after receipt of the comments on the draft final report from PDMC governments and ADB. It will have the agreed-upon publishable desktop format, and the agreed-upon content.
- (vi) **Publication.** The consultants will edit the final report into a format suitable for publication by ADB. The final content of the publication will be the responsibility of the international consultants, in consultation with ADB. The research coordinator will assist with the logistics of the publication.

10. The final report will follow the outline below, subject to revisions proposed and agreed upon by the consultants and ADB during the course of the TA.

- (i) **Introduction.** Outline the study's objectives and process.
- (ii) **Background.** Describe the broad national and regional contexts; provide separate subsections describing the aviation, shipping, and road transport subsectors, and outline the team's expectation of how the specific national and regional factors affect the study's objectives.
- (iii) **Methodology.** Describe the team's approach to data collection, analysis, and compilation; explain the rationale for selecting the country case studies; and summarize the consultation process and outcomes.
- (iv) **Findings.** Describe in detail the team's (a) assessment of direct and indirect logistics costs of each transport subsector; (b) analysis of market structures; (c) the impacts of market structure and constraints in improving and expanding efficient transport services. Explain how the findings can be extrapolated to countries and sectors beyond the case studies.
- (v) **Recommendations.** Outline sector road maps for aviation, shipping, and road transport covering potential portfolios of programs and policy reforms, focusing on potential improvements in public sector operations, private sector participation, and regional cooperation. Where appropriate, include references to international best practices and the feasibility of adaptation to the Pacific context.
- (vi) **Appendixes.** Present, in succinct format for each country and for the Pacific region, data on transport services covering operations, costs, prices charged, infrastructure, regulations affecting services, and descriptions of market structure provided by the public and private sectors.