

**ASIAN DEVELOPMENT BANK**

**TAR:STU 36046**

**TECHNICAL ASSISTANCE**  
**FOR**  
**ROAD SAFETY IN THE**  
**ASSOCIATION OF SOUTHEAST ASIAN NATIONS**

**December 2002**

## ABBREVIATIONS

|         |   |   |
|---------|---|---|
| ADB     | – | Asian Development Bank  |
| ASEAN   | – | Association of Southeast Asian Nations  |
| DMC     | – | developing member country   |
| GDP     | – | gross domestic product  |
| Lao PDR | – | Lao People's Democratic Republic  |
| NGO     | – | nongovernment organization  |
| RSA     | – | road safety agency (whichever government department has official responsibility for road safety issues) |
| STOM    | – | senior transport officials meeting of ASEAN   |
| TA      | – | technical assistance  |
| TOR     | – | terms of reference  |

## NOTE

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

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## I. INTRODUCTION

1. Road crashes are a growing worldwide problem, resulting in around 1 million deaths and over 23 million injuries per year. Around 85% of these deaths occur in developing member countries (DMCs). The problem is particularly acute in the Asia-Pacific region, which has only around 16% of the world's motorized vehicle fleet but accounts for 44% of global road deaths.<sup>1</sup>

2. Rapid economic development in the Association of Southeast Asian Nations (ASEAN)<sup>2</sup> countries has increased the number of motor vehicles, significantly worsening road safety. In 2000,<sup>3</sup> ASEAN alone had an estimated 72,800 road deaths and over 1.8 million injuries, many serious or resulting in permanent disability. Road crashes cause large economic losses annually, which inhibit economic and social development and worsen poverty.

3. The fourth ASEAN transport ministers' meeting in Singapore in September 1998 thus agreed that road safety should be greatly improved. It was included among the priority cooperation areas in the Successor Plan of Action in Transport 1999–2004. Because of the continuing deterioration in road safety and growing urgency of the problem, in August 2001 ASEAN formally requested regional technical assistance (TA) to help strengthen the capacity of road safety agencies in ASEAN members, and improve cooperation and share best practice across the region.<sup>4</sup>

## II. ISSUES

4. The WHO forecasts that death and disability from road crashes will increase in all countries, with road crashes moving from the ninth to third most important health problem by 2020.<sup>5</sup> While the more industrialized countries have in recent decades steadily and systematically reduced the number and severity of road crashes by implementing coordinated multisector remedial programs, the developing world, especially Asia, continues to witness the worsening problem. The very high proportion of two- and three-wheeled vehicles in ASEAN's vehicle fleet (Cambodia [75%], Indonesia [73%], Lao People's Democratic Republic [Lao PDR] [79%], Malaysia [51%], and Viet Nam [95%]); the mix of traffic; underdeveloped infrastructure and institutions; and rapid motorization all add to the growing problem. The fact that most recent vehicle growth has been in motorcycles exacerbates an already dangerous traffic environment; for instance, the number of motorcycles in Viet Nam increased by 29% in 2001, resulting in a 37% increase in road deaths that year. The situation will likely deteriorate even further unless urgent and effective action is taken to help ASEAN make its roads safer.

5. Road crashes impose costs on countries of around 2% of their annual gross domestic product (GDP) and, on this basis, the cost to the ASEAN countries is estimated at over \$11 billion annually. These recurring economic losses undoubtedly inhibit economic and social development. Road crashes also disproportionately harm low-income groups as pedestrians

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<sup>1</sup> Jacobs, G., A. Aeron–Thomas, and A. Astrop. 2000. *Estimating Global Road Fatalities*. TRL Report 445. Crowthorne.

<sup>2</sup> The Association of Southeast Asian Nations comprises Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Viet Nam.

<sup>3</sup> Mission estimates after correction for differing definitions and underreporting across the region.

<sup>4</sup> The TA first appeared in *ADB Business Opportunities* (Internet edition) on 9 July 2002.

<sup>5</sup> World Health Organization. 1999. *World Health Report 1999— Making a Difference*. Geneva.

and bicycle and motorcycle riders are the most frequent casualties. When a household head is killed or disabled, poverty is significantly perpetuated or even increased.<sup>6</sup>

6. The Asian Development Bank (ADB) carried out a regional road safety study<sup>7</sup> in 1996–1997 to quantify the scale and characteristics of the problem and to develop comprehensive guidelines to help DMCs address road safety. The guidelines raised awareness of the problem, and many countries subsequently included safety activities in their road sector operations. However, few study recommendations are being implemented, and the various initiatives and pilot projects established during such projects have generally ceased with the completion of external assistance. In most cases, this is because the country has not established effective coordination mechanisms or assigned adequate financial and technical resources to allow such safety activities to continue and expand beyond the project. The resources invested in safety studies, many of which have produced worthwhile action plans and recommendations, will not, therefore, provide a return unless obstacles preventing their implementation are removed.

7. Fact-finding visits to ASEAN members identified obstacles and impediments to road safety and concluded that their removal would allow government agencies to become proactive and effective in making roads safe. ADB can be the “honest broker,” untainted by local departmental rivalries, in helping countries devise the best mechanism to facilitate effective action.

8. The proposed assistance will strengthen the capability and capacity of key agencies to coordinate and implement road safety activities and help prepare road safety action plans that can be used as frameworks to target resources and future assistance. The logical framework for the TA is in Appendix 1. This TA will build on the earlier ADB assistance by helping ASEAN members strengthen their institutional capacity to address road safety issues more effectively. No comprehensive regional program addresses road safety in ASEAN. The TA outputs will be useful to all DMCs, and ADB will widely disseminate the results.

### III. THE TECHNICAL ASSISTANCE

#### A. Purpose and Output

9. The TA's purpose is to develop institutional capacity in relevant agencies in ASEAN members to enable them to address road safety issues more effectively. In particular, the TA will help identify problems and impediments preventing effective action on road safety and help the countries develop prioritized action plans to remove such obstacles. The TA will also strengthen subregional cooperation by sharing best practices, harmonizing accident data systems, and developing regional strategies and approaches on common issues (e.g., motorcycle safety).

10. The main components and outputs of this TA are as follows:

- (i) **Institutional strengthening.** Identify/remove institutional obstacles, establish improved safety management structures, establish effective coordination and funding mechanisms, develop priority action plans, and implement improved accident data systems.

<sup>6</sup> Ghee, C., D. Silcock, A. Astrop, and G.D. Jacobs. 1997. *Socio Economic Aspects of Road Accidents in Developing Countries*. TRL Report 247. Crowthorne.

<sup>7</sup> ADB. 1995. *Technical Assistance for Regional Initiatives in Road Safety*. Manila.

- (ii) **Capacity building and human resource development.** Upgrade knowledge and skills of key agencies to analyze in-depth accident data and develop targets and remedial countermeasures, develop crash cost estimates and show how to use them to improve resource allocation, check cost-effectiveness of safety interventions, and develop local safety research capability.
- (iii) **Regional cooperation.** Develop regional activities and workshops to share knowledge, disseminate best practices, develop a knowledge network and sharing mechanism among ASEAN countries, and promote links to international safety organizations.
- (iv) **Private sector.** Assess how the private sector and civil-society organizations can lead in safety activities, and encourage these organizations' involvement in national road safety priority action plans.

## **B. Methodology and Key Activities**

11. Discussions with the ASEAN Secretariat and agencies in the individual countries indicated that many of them had developed action plans or had completed safety studies in recent years, but that such plans or study recommendations had generally gone unimplemented. A number of institutional and other problems were found to be common to all countries and preventing effective action: ineffective coordination mechanisms, inadequate budgets and technical resources to manage and coordinate road safety activities, absence of knowledge about the true economic costs of road accidents, inadequate accident data systems, poor analysis of data, unsustainable funding of road safety activities, and safety problems due the high volume of motorcycles in the vehicle fleet. Past failure to resolve and overcome these obstacles prevents effective action. ASEAN countries will be best served by helping countries identify and remove the obstacles inhibiting their ability and effectiveness to address safety problems.

12. The TA will be implemented in three steps: (i) estimate the true costs of road crashes and quantify the scale and characteristics of the problem, identify/assess obstacles preventing effective road safety action in each country, and recommend appropriate policy and institutional reforms that ADB can adequately support through country action plans; (ii) consolidate the findings and facilitate exchange of best practice and networking at the regional level; and (iii) translate the findings and consolidate them into a regional strategy to support individual countries' reform agendas and ADB's regional efforts to improve road safety.

13. The key activities of the TA are as follows:

- (i) Define road safety development with specific and relevant monitorable indicators to measure progress.
- (ii) Analyze lessons learned in ASEAN and other regions, including innovative approaches, initiatives, organizational structures, and funding mechanisms that might be applied in ASEAN.
- (iii) Formulate for each country a monitorable action plan to establish the structures and mechanisms to address road safety issues, including strategic directions for

road safety development in terms of priority interventions, reform processes, and sequencing.

- (iv) Consolidate the findings of the country road safety assessments and formulate a monitorable ASEAN strategy and action plan that will identify directions for change, strategic thrusts, and operational priorities in terms of policy and institutional reforms.

14. The priority action plans will be prepared during national workshops with relevant representatives of government, private sector, and nongovernment organizations. The regional road safety strategy and action plan will be discussed and developed at an ASEAN regional workshop with senior DMC representatives. The plan will then be presented for endorsement at the meeting of the ASEAN ministers of transport in September 2004. Commitment at this high level will facilitate implementation of the in-country and ASEAN strategies and action plan. The strategy will guide ADB assistance to the countries.

### **C. Cost and Financing**

15. The total TA cost is estimated at \$555,000 equivalent. ADB will finance \$500,000 on a grant basis from the ADB-funded TA program. The Government of Singapore will cofinance, on a parallel basis, \$55,000 equivalent (comprising remuneration of Singapore resource experts and provision of training facilities) under the Singapore-ADB Cooperation Program. The details of the cost estimates are in Appendix 2.

### **D. Implementation Arrangements**

16. ADB's Regional and Sustainable Development Department, Finance and Infrastructure Division, will be the Executing Agency for the TA, and the ASEAN Land Transport Working Group will act as the project steering committee. A monitoring framework will be established so that countries can report the progress of their road safety priority action plan at the semiannual meetings of the committee. This will enable the monitoring to continue after TA completion. Use of the Internet for networking and communications will be encouraged to promote low-cost and sustainable knowledge sharing and technical cooperation across the region.

17. Consulting services of 29 person-months (9 international and 20 domestic) will be procured by hiring individual specialists. The international consultant team will consist of a senior road safety action plan specialist as team leader (6 person-months, intermittent) and a road safety specialist (3 person-months, intermittent). The specialists will be supported by domestic consultants working on an intermittent basis on road safety engineering, transport economics, traffic enforcement, emergency services, education, and communication skills. In each country,<sup>8</sup> domestic consultants will be appointed to estimate road crash costs, analyze data, and help the country organize a national road safety workshop. The 2-day workshop, which will include participation by international safety specialists, will discuss key issues, examine ways to remove obstacles to road safety, and draw up a prioritized 3-year action plan. The in-country workshops will be followed by an ASEAN workshop to address common issues, exchange information, share good practices, and develop an ASEAN road safety strategy and priority action plan. International and regional resource persons will be used during the national and regional workshops to discuss technical knowledge and describe best practice. The outline terms of reference for the consultants are in Appendix 3. Consultants will be engaged as

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<sup>8</sup> Except Brunei Darussalam, where consultants from a member country will be deployed.

individuals in accordance with ADB's *Guidelines on the Use of Consultants* and other arrangements satisfactory to ADB for the engagement of domestic consultants.

18. The TA will commence in March 2003 and be completed after 20 months by the end of November 2004. The consultants will submit electronically an inception report and brief progress quarterly reports. Copies of country road safety action plans will be submitted to ADB and the ASEAN Secretariat as they are completed. Once the 10 country workshops have been completed and the individual road safety action plans prepared, a regional workshop will be arranged to discuss common problems, share best practices, and discuss and prepare a regional strategy and priority action plan. Within 8 weeks of completion of the regional workshop, the consultants will submit a draft ASEAN regional strategy and priority action plan to ADB, ASEAN Secretariat, and steering committee for comment before preparation of the final draft. It will be presented at the ASEAN senior transport officials meeting in September 2004 and at the accompanying meeting of ASEAN ministers of transport for endorsement as a priority area in the ASEAN Transport Cooperation Framework Plan. A final report summarizing the project and outputs will be submitted to ADB within 6 weeks of the presentation to the ministerial meeting.

#### **IV. THE PRESIDENT'S DECISION**

19. The President, acting under the authority delegated by the Board, has approved the provision of technical assistance not exceeding the equivalent of \$500,000 on a grant basis for Road Safety in the Association of Southeast Asian Nations, and hereby reports this action to the Board.

## TECHNICAL ASSISTANCE FRAMEWORK

| Design Summary   | Performance Indicators/Targets  | Monitoring Mechanisms   | Assumptions and Risks  |
|--|---|---|--|
| <p><b>Goal</b></p> <ul style="list-style-type: none"> <li>• Reduced road casualties through increased and more effective road safety activity in individual Association of Southeast Asian Nations (ASEAN) members and increased regional cooperation on road safety issues</li> </ul> | <ul style="list-style-type: none"> <li>• Appropriate policies, strategies, and action plans for regional cooperation and in-country action to address causes and consequences of road accidents</li> </ul>  | <ul style="list-style-type: none"> <li>• Regular reporting to ASEAN ministers of transport and senior transport officials meetings (STOM)</li> </ul>  | <ul style="list-style-type: none"> <li>• Continued commitment of countries in ASEAN</li> <li>• Political and economic stability in the concerned countries</li> </ul>  |
| <p><b>Project Objective</b></p> <ul style="list-style-type: none"> <li>• Strengthened institutional capacity of ASEAN members to better manage and implement road safety programs</li> </ul>   | <ul style="list-style-type: none"> <li>• Identification of the constraints and obstacles preventing or inhibiting effective action to improve road safety</li> <li>• Monitorable actions in each country aimed at removing constraints and improving institutional capacity to analyze the problem and develop and implement appropriate countermeasures</li> </ul> | <ul style="list-style-type: none"> <li>• Quarterly progress reports of consultants</li> <li>• Action plans with time-bound targets in each ASEAN member</li> <li>• Semiannual road safety newsletters on ASEAN road safety issues</li> <li>• Meetings of the road safety and transport committee of the ASEAN land transport working group</li> </ul> | <ul style="list-style-type: none"> <li>• Continuation of ASEAN regional safety technical assistance (TA)</li> <li>• Continued commitment of concerned institutions and partners in ASEAN members</li> <li>• Continued commitment of ASEAN members and ASEAN Secretariat</li> </ul> |

| <b>Design Summary</b>   | <b>Performance Indicators/Targets</b>   | <b>Monitoring Mechanisms</b>  | <b>Assumptions and Risks</b>  |
|---|---|---|---|
|   | <ul style="list-style-type: none"> <li>• Monitorable ASEAN-wide action plan aimed at improving institutional capacity of member countries to address road safety issues and increase regional cooperation in this sector</li> </ul>   | <ul style="list-style-type: none"> <li>• ADB programming and review visits</li> </ul>   | <ul style="list-style-type: none"> <li>• Continued ADB operational program to include road safety and review visits to concerned countries</li> </ul>   |
| <p><b>Outputs</b></p> <ul style="list-style-type: none"> <li>• Enhanced understanding of the costs and nature of the road safety problems and the constraints on effective action in each ASEAN member</li> <li>• Action plans for institutional strengthening of road safety activity in each ASEAN member</li> <li>• ASEAN-wide action plan to improve road safety and increase regional cooperation in this sector</li> <li>• Improved regional networking on road safety issues between countries and institutions</li> </ul> | <ul style="list-style-type: none"> <li>• Research reports by local consultants summarizing the scale and nature of the problem and estimating costs of road accidents to the national economy</li> <li>• Ten successful national workshops involving open discussion by government, private sector, and nongovernment organizations (NGOs) and development of national priority action plans</li> </ul> | <ul style="list-style-type: none"> <li>• Reports of local consultants and researchers</li> <li>• Quarterly consultant team leader reports</li> <li>• Proceedings of national and regional workshops showing content and delegates attending</li> <li>• ASEAN road safety TA steering committee (formed from the road safety and transport committee of ASEAN land transport working group)</li> </ul> | <ul style="list-style-type: none"> <li>• Adequate and timely performance by local consultants/researchers</li> <li>• Continued commitment by the concerned countries</li> <li>• Continued commitment by concerned ASEAN institutions and partner organizations</li> <li>• Willingness of one ASEAN member or organization to take over the task of compiling and distributing the ASEAN road safety newsletter beyond the TA project</li> </ul> |

| <b>Design Summary</b>  | <b>Performance Indicators/Targets</b>  | <b>Monitoring Mechanisms</b>   | <b>Assumptions and Risks</b>   |
|--|--|--|--|
| <ul style="list-style-type: none"> <li>• Early identification of potential safety components for inclusion in current and future ADB loans</li> </ul>  | <ul style="list-style-type: none"> <li>• Successful regional workshop to agree on regional actions and cooperation on road safety issues and development of an ASEAN regional road safety plan</li> <li>• Designation of one organization or institution in each country to act as a national focal point and dissemination center on road safety issues</li> <li>• Inclusion of road safety components in relevant ADB loans</li> </ul> | <ul style="list-style-type: none"> <li>• Reporting of progress on action plan implementation to ASEAN STOM</li> <li>• Semiannual ASEAN road safety newsletters</li> </ul>  |  |
| <p><b>Activities</b></p> <ul style="list-style-type: none"> <li>• Estimation of road accident costs and analyses of accident data to identify scale, nature, and characteristics of road safety problem in each country</li> <li>• Review of institutional strengths and weaknesses with respect to road safety activity in ASEAN</li> </ul> | <ul style="list-style-type: none"> <li>• Consultant reports documenting methodology and valuation of road accidents and analyses of road accident data in each country</li> <li>• Consultant reports and recommendations on regional cooperation and strategy</li> </ul>   | <ul style="list-style-type: none"> <li>• Local consultant reports documenting work</li> <li>• Consultant quarterly reports to ADB</li> <li>• Periodic reporting to ASEAN safety TA steering committee and ASEAN Secretariat</li> </ul> | <ul style="list-style-type: none"> <li>• Availability of relevant information and adequate and timely performance of local consultants</li> <li>• Continued commitment by concerned countries and ASEAN</li> </ul> |

| <b>Design Summary</b>  | <b>Performance Indicators/Targets</b>   | <b>Monitoring Mechanisms</b>  | <b>Assumptions and Risks</b>   |
|--|---|---|--|
| <ul style="list-style-type: none"> <li>• National workshops to discuss and identify constraints inhibiting effective action on road safety and development of priority action plans to remove/reduce such constraints</li> <li>• Regional workshop to agree on an ASEAN priority action plan to improve road safety and increase regional cooperation on road safety issues</li> <li>• Improvement of networking and knowledge sharing on road safety issues across the region</li> <li>• Publication of an ASEAN road safety newsletter to report on implementation of national road safety action plans and encourage regional cooperation/ exchange of information</li> </ul> | <ul style="list-style-type: none"> <li>• National workshops with 30-40 participants from key government agencies, private sector, and NGOs, to discuss institutional constraints and agree on actions to enable proactive and effective road safety activity</li> <li>• A regional workshop to amalgamate country priority action plans into an ASEAN regional action plan and to agree on regional initiatives and cooperation</li> <li>• Identification of one research institute or organization in each country to act as the national focal point/ dissemination center on road safety issues, and to act as a regional focal point on behalf of ASEAN region</li> </ul> | <ul style="list-style-type: none"> <li>• Reporting to ASEAN senior transport officials meetings (two per year)</li> <li>• Report to ASEAN ministers of transport meetings (one per year)</li> <li>• Progress monitoring reports on implementation of each national prioritized road safety action plan</li> <li>• Progress monitoring reports on implementation of the ASEAN strategy and action plan</li> <li>• Consultant quarterly progress reports</li> <li>• ASEAN road safety newsletter distributed after the TA ends</li> </ul> | <ul style="list-style-type: none"> <li>• Willingness and commitment of countries to invest in road safety and take necessary action to improve capacity as required</li> <li>• Willingness of individual countries to carry out monitoring and report progress</li> <li>• Willingness of the ASEAN Secretariat to consolidate country progress reports to produce progress on ASEAN strategy and action plan</li> <li>• Willingness of regional focal point to continue compiling and distributing the newsletter</li> </ul> |

| Design Summary  | Performance Indicators/Targets   | Monitoring Mechanisms   | Assumptions and Risks  |
|---|--|---|--|
|   | <ul style="list-style-type: none"> <li>Participation of the regional focal point in preparing the first two issues of ASEAN road safety newsletter and taking over the preparation/dissemination when the TA ends</li> </ul>   |   |  |
| <p><b>Inputs</b></p> <ul style="list-style-type: none"> <li>Consultants</li> <li>Resource persons and use of training center facilities in four countries</li> <li>Workshops</li> </ul> | <ul style="list-style-type: none"> <li>International consultants (9 person-months) and domestic and regional consultants (20 person-months)</li> <li>Resource persons from Singapore (4 persons x 3 days x 5 workshops) for participation in 5 national workshops (Cambodia, Indonesia, Lao People's Democratic Republic, Myanmar, Viet Nam) plus use of four training centers</li> <li>Contribution to costs of preparing and implementing 10 national workshops and 1 regional workshop</li> </ul> | <ul style="list-style-type: none"> <li>ADB reviews/terms of reference (TORs) and ASEAN safety TA steering committee</li> <li>ADB reviews/TORs</li> <li>ADB-Singapore cooperation agreement</li> <li>ADB reviews/TORs</li> </ul> | <ul style="list-style-type: none"> <li>Timely preparation and organization of work by the consultant team</li> <li>Willingness of Singapore to provide resource persons and use of their in-country training facilities</li> <li>Willingness of ASEAN to help organize national workshops and release senior government personnel to attend a national workshop and 4-5 key persons for a regional workshop later</li> </ul> |

**COST ESTIMATES**  
(\$'000)

| <b>Item</b>                                       | <b>Total<br/>Cost</b> |
|---|-----------------------|
| <b>A. Asian Development Bank Financing</b>        |                       |
| 1. Consultants                                    |                       |
| a. Remuneration and Per Diem                      |                       |
| i. International Consultants                      | 210.0                 |
| ii. Domestic Consultants                          | 60.0                  |
| b. International and Local Travel                 | 80.0                  |
| c. Communications                                 | 12.0                  |
| 2. National Workshops                             |                       |
| a. Resource Persons                               | 8.0                   |
| b. Workshop/Training Program                      | 30.0                  |
| 3. Regional Workshops                             |                       |
| a. Resource Persons                               | 5.0                   |
| b. Workshop/Training Program                      | 35.0                  |
| 4. Miscellaneous Administration and Support Costs | 10.0                  |
| 5. Reporting and Documentation                    | 10.0                  |
| 6. Contingencies                                  | 40.0                  |
| <b>Subtotal (A)</b>                               | <b>500.0</b>          |
| <b>B. Singapore Financing</b>                     |                       |
| 1. National Workshops                             |                       |
| a. Resource Persons                               | 51.0                  |
| b. Workshop/Training Program                      | 4.0                   |
| <b>Subtotal (B)</b>                               | <b>55.0</b>           |
| <b>Total</b>                                      | <b>555.0</b>          |

## OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

1. The consulting services will include 9 person-months of international expertise, including one senior specialist (a road safety action plan adviser and the team leader) and one road safety specialist, and 20 person-months of national and/or regional consultants.

### **A. Road Safety Action Plan Adviser (team leader, international, 6 person-months)**

2. The team leader will work closely with the Association of Southeast Asian Nations (ASEAN) Secretariat and concerned national and regional institutions from government, the private sector, and civil-society organizations to ensure coordination and effective implementation of the technical assistance (TA). The team leader will coordinate the work of other consultants and counterpart staff, as well as liaise with other national, regional, and international road safety agencies (RSAs) and organizations such as the Global Road Safety Partnership.

3. The consultant will have the following responsibilities:

- (i) Help the ASEAN Secretariat and associated institutions ensure effective TA implementation; and provide technical advice, guidance, and direction to the other consultants and associated institutions in all matters pertaining to TA implementation.
- (ii) Prepare and submit to the ASEAN steering committee and Asian Development Bank (ADB) regular quarterly reports on implementation progress and make presentations as required to the ASEAN steering committee, senior transport officials and ministers of transport, ADB, and others with an interest in the TA.
- (iii) Prepare and conduct meetings in the ASEAN members with relevant government, private sector, and nongovernment organization (NGO) representatives to identify possible areas for discussion in workshops and help the government departments and RSA in each country plan and schedule their national workshop for local convenience while fitting into the regional program.
- (iv) Provide guidance to domestic consultants on the methodology to be used in costing road accidents. Guidance will be provided on road safety and related data to be gathered; the technical analyses to be undertaken to provide a consistent and systematic understanding of the scale, nature, and characteristics of the problem in each country; and the format and content of the report required from each consultant before each workshop.
- (v) Oversee the work of domestic consultants carrying out local background research studies and helping the RSA organize the national workshops.
- (vi) Agree with the RSA on national workshop content, program, participants, and speakers, and arrange presentations by external resource persons. Within each country a multisectoral approach will be taken with the private sector and NGO stakeholders to identify and discuss road safety problems and potential solutions. The workshop will focus on specific constraints inhibiting safety activities in the

country, and the priority actions needed to remove such institutional and other impediments.

- (vii) After the national workshop, oversee consolidation of the workshop findings into a draft time-bound road safety priority action plan focusing on removing institutional and other impediments inhibiting or preventing road safety. The draft document will be finalized and endorsed by the RSAs and will form the country's contribution to the ASEAN road safety action plan.
- (viii) Help the RSA establish a monitoring framework for the priority action plan and devise suitable monitoring indicators to assess, and report to the national government and the ASEAN Secretariat on, the progress in implementing the major plan components.
- (ix) Collaborate with the ASEAN Secretariat to identify a member country willing to host and organize the regional workshop and develop, in consultation with ADB and the ASEAN steering committee, the content, program, participants, and speakers for the regional workshop. The workshop will focus on common problems such as motorcycle and pedestrian safety, improvement of the accident database, accident costing etc., and will examine ways to strengthen knowledge sharing, identification of best practice, and regional cooperation on safety issues across ASEAN.
- (x) After the regional workshop, oversee consolidation of the workshop findings into a draft time-bound ASEAN road safety strategy and priority action plan incorporating the action plans of the ASEAN members, including regional initiatives to encourage knowledge sharing and cooperation on safety issues. The draft document will be finalized after consultations with the ASEAN steering committee, ADB, and other interested parties, and will be presented for endorsement by ASEAN senior transport officials and transport ministers.
- (xi) Help the ASEAN Secretariat establish a monitoring framework for the strategy and priority action plan and devise suitable monitoring indicators to assess and report on progress.
- (xii) Identify in each country a research institute, university, or other capable organization that would be interested in functioning as a national focal point/dissemination center on road safety issues for information exchange and cooperation with similar national focal points in other ASEAN members. Identify one of these national focal points to act as a regional focal point or dissemination center for information exchange and liaison with other regions.
- (xiii) Initiate and—with the assistance of the regional focal point and contributions from national focal points, including national RSAs and private sector companies—produce the first two issues of a semiannual ASEAN road safety newsletter for distribution to all ASEAN members. It will briefly cover safety activity in each country, record joint research and exchange visits, and encourage cooperation and collaboration on common problems and issues. From the third issue onward, the newsletter will be prepared and distributed by the regional focal point.

- (xiv) In consultation with other members of the consultancy team, prepare a report documenting the work undertaken during the TA and recommending further work needed to strengthen road safety activity in ASEAN. The final report will be produced in hard copy and as a compact disk-read only memory.

**B. Road Safety Specialist (international, 3 person-months)**

4. The road safety specialist will have the following responsibilities:

- (i) Prepare and submit electronically a brief (two pages, maximum) monthly progress report to the team leader indicating progress on agreed-on joint and delegated tasks.
- (ii) Help the team leader ensure effective TA implementation and provide technical advice and guidance and direction to national consultants and associated institutions on TA implementation.
- (iii) Provide intermittent inputs and presentations as agreed on with the team leader during national and regional workshops and pre- and postworkshop activities.
- (iv) Make short visits/telephone calls and E-mail correspondence to key contacts in specified ASEAN countries as delegated by the team leader to check progress on research/studies/data analyses conducted by national consultants and to ensure that planning and coordination of national workshops by local RSAs is on track. Report on the progress in each country via the monthly report in (i).
- (v) Help RSAs define workshop content, program, participants, and speakers, and help identify institutional constraints on safety work and possible actions to remove them.
- (vi) During and after the national workshop, help the RSA consolidate the workshop findings into a draft time-bound road safety priority action plan focusing on removing institutional and other impediments to road safety work.
- (vii) Help the team leader devise monitoring indicators to assess, and report to the national government and the ASEAN Secretariat on, progress in implementing the major components of the priority action plan.
- (viii) Help the team leader develop the content, program, participants, and speakers for the regional workshop. The workshop will focus on common problems (such as motorcycle safety) and examine ways to strengthen knowledge sharing and regional cooperation on safety issues in ASEAN.
- (ix) After the regional workshop, help consolidate the workshop findings into a draft time-bound ASEAN road safety strategy and priority action plan incorporating the action plans of the member countries and including regional initiatives to encourage regional knowledge sharing and cooperation on safety issues.
- (x) Help identify in each country a research institute, university, or other capable organization that would be interested in functioning as a national focal point and/or dissemination center on road safety issues for information exchange and

cooperation with similar national focal points in other ASEAN countries. Identify one of these national focal points to act as a regional focal point and/or dissemination center for information exchange and liaison with other regions.

- (xi) Help the team leader initiate and produce the first two issues of an ASEAN regional newsletter with short reports from each country to cover safety activity, record joint research and exchange visits, and encourage cooperation and collaboration on common problems and issues.
- (xii) Contribute to the final report documenting the work undertaken during the TA and recommend further work needed to strengthen road safety activity in ASEAN.

### **C. Consultants and Researchers (domestic, 8–10, 20 person-months total)**

5. The individual terms of reference will be written for each consultant depending on the work to be carried out in each country, but the general tasks and responsibilities will be as follows:

- (i) Under the overall direction of the team leader or his delegated representatives, provide intermittent consultancy and/or research inputs as required to carry out agreed-on tasks and produce the agreed-on reports, analyses, or outputs by the deadlines specified.
- (ii) Collect the necessary information and data from relevant government agencies and carry out a road crash costing estimation exercise (using the methodology provided by the team leader). Produce a report in an agreed-on format showing costs of an average road death, road injury, fatal crash, injury crash, and crash damaging only property, and the estimated accumulative annual losses to the national economy as a percentage of annual gross domestic product.
- (iii) Collect as much of the missing road safety and related information on crashes, population, vehicles, etc. as possible by filling in the empty cells on preprinted partly completed tables (supplied by the team leader) and visit each RSA to complete the questionnaire. Return a copy of the completed tables and questionnaire to the team leader by the agreed-on dates.
- (iv) Use the retained copy of tables to carry out in-depth analysis of the data to identify main trends and the scale, nature, and characteristics of the road safety problem. In particular, identify recent trends in growth of vehicles, in vehicle types most frequently involved, and in road-user groups injured and killed in road crashes. Relate the numbers of casualties (killed + injured) in each age group to the percentage of that age group in the general population. Relate the number of each type of vehicle involved in crashes to the number of vehicles of that type in the vehicle fleet, etc. to identify the high-risk road-user groups and vehicles types that should be targeted to improve road safety.
- (v) Prepare a Powerpoint slide show on the costs, scale, nature, and characteristics of the road safety problem for the national safety workshop.

- (vi) Provide copies (paper and electronic) of the agreed-on reports, analyses, Powerpoint presentations, and other outputs to the team leader for use in the regional workshop and for inclusion in final project documentation.