



# Technical Assistance Report

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Project Number: 48033  
Regional—Capacity Development Technical Assistance (R-CDTA)  
December 2014

## Enhancing Road Safety for Central Asia Regional Economic Cooperation Member Countries

This document is being disclosed to the public in accordance with ADB's Public Communications Policy 2011.

Asian Development Bank

## ABBREVIATIONS

ADB	–	Asian Development Bank
CAREC	–	Central Asia Regional Economic Cooperation
DMC	–	developing member country
PRC	–	People’s Republic of China
TA	–	technical assistance
TASF	–	Technical Assistance Special Fund
TSCC	–	Transport Sector Coordinating Committee
UN	–	United Nations
WHO	–	World Health Organization

## NOTE

In this report, “\$” refers to US dollars.

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## CAPACITY DEVELOPMENT TECHNICAL ASSISTANCE AT A GLANCE

<b>1. Basic Data</b>		<b>Project Number: 48033-001</b>	
<b>Project Name</b>	Enhancing Road Safety for Central Asia Regional Economic Cooperation Member Countries	<b>Department /Division</b>	CWRD/CWTC
<b>Country Borrower</b>	REG N/A	<b>Executing Agency</b>	Asian Development Bank
<b>2. Sector</b>		<b>ADB Financing (\$ million)</b>	
✓ Transport	Road transport (non-urban)		1.50
		<b>Total</b>	<b>1.50</b>
<b>3. Strategic Agenda</b>		<b>Climate Change Information</b>	
Inclusive economic growth (IEG)	Pillar 1: Economic opportunities, including jobs, created and expanded	Climate Change impact on the Project	Low
Regional integration (RCI)	Pillar 1: Cross-border infrastructure		
<b>4. Drivers of Change</b>		<b>Gender Equity and Mainstreaming</b>	
Governance and capacity development (GCD)	Institutional development	No gender elements (NGE)	✓
Knowledge solutions (KNS)	Application and use of new knowledge solutions in key operational areas Knowledge sharing activities Pilot-testing innovation and learning		
Partnerships (PAR)	Implementation South-South partner		
<b>5. Poverty Targeting</b>		<b>Location Impact</b>	
Project directly targets poverty	No	Regional	High
<b>6. TA Category:</b>	B		
<b>7. Safeguard Categorization</b>	Not Applicable		
<b>8. Financing</b>			
<b>Modality and Sources</b>		<b>Amount (\$ million)</b>	
<b>ADB</b>		<b>1.50</b>	
Sovereign Capacity development technical assistance: Technical Assistance Special Fund		1.50	
<b>Cofinancing</b>		<b>0.00</b>	
None		0.00	
<b>Counterpart</b>		<b>0.00</b>	
None		0.00	
<b>Total</b>		<b>1.50</b>	
<b>9. Effective Development Cooperation</b>			
Use of country procurement systems			No
Use of country public financial management systems			No

## I. INTRODUCTION

1. The Central Asia Regional Economic Cooperation (CAREC)<sup>1</sup> Transport and Trade Facilitation Strategy 2020 outlines the need for region-wide improvements in road safety, noting that it is economically and socially beneficial to invest in improving safety of the region's roads.<sup>2</sup> The strategy envisages that support will be provided for road safety management capacity, safe approaches to the design, construction, operation and maintenance of road infrastructure, and mobilization of resources for road safety measures. The strategy calls for a regional road safety strategy to be developed, integration of safety into the design of each CAREC road project, and increased network sustainability through safety efforts and both stand-alone projects and regional technical assistance (TA) programs, focused on road safety.<sup>3</sup>

2. The TA addresses road safety in CAREC member countries. It links with the country partnership strategies of several CAREC member countries, which identify road safety as a key challenge. The TA was presented at a meeting of the CAREC Transport Sector Coordinating Committee (TSCC) in Bishkek on 14–15 May 2014, and all the country delegations confirmed the need for concerted region-wide action on road safety and supported the TA.

## II. ISSUES

3. An estimated 1.2 million–1.3 million people are killed, and up to 50 million injured, on the world's roads every year. Without decisive intervention, the annual fatality toll is forecast to increase to more than 1.8 million by 2020.<sup>4</sup> In response to this growing problem, the United Nations (UN) General Assembly identified road safety as an urgent global health issue. The UN secretary general called upon all UN agencies and development institutions, including ADB, to assist the UN member countries in addressing this urgent and growing problem. The need for a global plan to provide a template of the sorts of activities that all countries should endeavor to carry out to improve road safety was agreed. Following this, the Decade of Action for Road Safety commenced in May 2011. The Decade of Action identified five pillars or activities: road safety management, safer roads and mobility, safer vehicles, safer road users, and post-crash response. By encouraging action on all of these pillars, it is hoped that the Decade of Action will result in 5 million fewer road collision fatalities.<sup>5</sup> The UN has mandated the World Health Organization (WHO) to take responsibility for road safety as an urgent health problem and to coordinate global efforts to reduce road deaths and injuries.

4. Over 90% of the world's fatalities on the road occur in low- and middle-income countries, which have only 48% of the world's registered vehicles. Low- and middle-income countries have higher road traffic fatality rates (21.5 per 100,000 population for low-income countries and 19.5 per 100,000 population for middle-income countries) than high-income countries (10.3 per 100,000 population). Traffic fatality rates in CAREC member countries range from 13.1 to 21.9 per 100,000 population.<sup>6</sup> Vehicle ownership rates in CAREC member countries are low but

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<sup>1</sup> CAREC member countries are Afghanistan, Azerbaijan, the People's Republic of China (PRC), Kazakhstan, the Kyrgyz Republic, Mongolia, Pakistan, Tajikistan, Turkmenistan, and Uzbekistan.

<sup>2</sup> ADB. 2014. *CAREC Transport and Trade Facilitation Strategy 2020*. Manila. p. 18.

<sup>3</sup> The TA first appeared in the business opportunities section of ADB's website on 11 November 2014. The TA concept was approved by the vice-president (Operations 1) on 10 November 2014.

<sup>4</sup> World Health Organization (WHO) and United Nations Road Safety Collaboration. 2010. *Global Plan for the Decade of Action for Road Safety 2011–2020*. New York; and WHO. 2011. *Decade of Action for Road Safety, 2011–2020: Saving Millions of Lives*. New York.

<sup>5</sup> UN. 2010. *General Assembly Resolution 64.255 (Improving Global Road Safety)*. New York.

<sup>6</sup> WHO. 2013. *Global Status Report on Road Safety*. Geneva; with the exception of Turkmenistan, for which data were derived from WHO. 2009. *Global Status Report on Road Safety*. Geneva.

are likely to increase over time. In the absence of concerted action on road safety, the toll of fatalities and injuries in the region is likely to increase markedly over the coming decades.

5. Road crashes are a recognized problem and CAREC member countries have been attempting to contribute to the UN Decade of Action goals. Several CAREC member countries have adopted national road safety strategies (e.g., Azerbaijan, the People's Republic of China, Kazakhstan, the Kyrgyz Republic, and Uzbekistan). However, not all of these are fully funded and road safety activities are generally under-resourced. There is a need to coordinate road safety activities across the CAREC region and to ensure that an adequate level of safety is provided on designated CAREC corridors.

6. In most CAREC member countries, strong, albeit varied, laws and policies regulate drunk driving, seatbelt wearing, helmet use, and use of mobile phones while driving—with levels of police enforcement varying widely. Additional resources are needed to reach the UN Decade of Action goals.

7. Knowledge transfer plays a key role in empowering CAREC member countries to adopt various road safety initiatives, and demand for ad hoc TA projects relating to road safety has increased. For example, ADB has assisted Kazakhstan to develop a methodology for evaluation of economic costs of road traffic collisions in order to enable cost-efficient investments and better-informed policy decisions on road safety to be made.<sup>7</sup> There is a growing need to provide road safety knowledge and training products to CAREC member countries to ensure that they incorporate international best practices into the design, construction and operation of their respective road networks.

8. The burden of road collisions falls disproportionately on the poor, with more than half of all road casualties in the vulnerable road user category, i.e., pedestrians, cyclists, or motorcyclists. Two-thirds of victims' families need to take loans to cover lost income, and many families are driven into poverty or indebtedness as a result of road collision-related fatalities or injuries.<sup>8</sup>

9. Road collisions are, however, preventable. Proper road safety management and coordination, improved data collection and research, engineering, enforcement, and education initiatives, as well as post-crash care, can all contribute to reducing the number and severity of road collisions.

10. Given that many of the issues noted above—to be addressed as part of this TA—are common to all CAREC member countries, it is more efficient for one TA to be carried out at regional (CAREC-wide) level. This TA will seek to maximize use of information and materials produced as part of previous road safety TA projects, particularly Improving Road Safety in the Association of Southeast Asian Nations.<sup>9</sup> This TA will also draw on lessons learned from a similar ADB TA project by encouraging government ownership from the outset and seeking involvement from civil society and other stakeholders, including the WHO.<sup>10</sup> The TA will also seek to ensure sustainability of project outputs and outcomes by embedding a road safety culture into CAREC member countries and by creating a critical mass of road safety expertise that can continue operating long after the completion of the TA.

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<sup>7</sup> ADB. 2014. *Technical Assistance to Kazakhstan for Joint Government of Kazakhstan and the Asian Development Bank knowledge and Experience and Exchange Program, Phase 1*. Manila.

<sup>8</sup> ADB. 2012. *Road Safety Action Plan: An Overview*. Manila.

<sup>9</sup> ADB. 2012. *Technical Assistance for Improving Road Safety in the Association of Southeast Asian Nations*. Manila.

<sup>10</sup> ADB. 2007. *Technical Assistance for Road Safety in the Association of Southeast Asian Nations*. Manila.

11. The TA will form part of ADB's contribution toward the UN Decade of Action goals. It is in line with ADB's Midterm Review of Strategy 2020.<sup>11</sup> The TA is also in line with ADB's Sustainable Transport Initiative, which indicated that ADB will "develop comprehensive road safety operations" in selected developing member countries including "support[ing] engineering and behavioral approaches to the safe design, construction, operation and maintenance of road infrastructure...and the development of road safety management capacity, road safety performance measurement and resource mobilization."<sup>12</sup>

### III. THE CAPACITY DEVELOPMENT TECHNICAL ASSISTANCE

#### A. Impact and Outcome

12. The impact will be improvements in road safety performance in CAREC member countries. The outcome will be strengthened capacity of CAREC governments to identify and address key road safety issues in their respective countries.

#### B. Methodology and Key Activities

13. The outputs of the TA will be (i) CAREC road safety strategy published; (ii) strengthened capacity of CAREC member countries to manage and coordinate road safety activities, including improved data collection and road collision research, improved engineering, education, and enforcement capacity; and (iii) integration of road safety evaluation tools into CAREC road projects.

14. To achieve these outputs, the following key activities will be undertaken:

- (i) The road safety performance of CAREC member countries will be reviewed and a draft road safety strategy will be compiled and presented to the CAREC TSCC. The CAREC road safety strategy will be finalized based on comments received. It will include an action plan outlining steps to be taken to improve road safety in CAREC member countries.
- (ii) The ability of CAREC member countries to identify key road safety issues and, in a targeted manner, develop and implement solutions and monitor their implementation will be enhanced. As a first step, the TA will review (a) existing collision reporting and road safety data collection systems, (b) competencies in road safety engineering, (c) levels of police enforcement of traffic laws, and (d) practices regarding road safety education.
- (iii) Drawing on the work of similar ADB TA projects, a series of best practice manuals and training materials will be adapted or produced, covering (a) road safety data systems and research, (b) road safety engineering, and (c) enforcement of traffic laws (footnote 9). Comprehensive train-the-trainer courses will be held for each of these areas. This will be followed up by national courses in at least three CAREC member countries, disseminating best practice.
- (iv) Guidelines on incorporating good practice in road safety in the design of future CAREC road projects will be produced. These guidelines will include a series of

<sup>11</sup> ADB. 2014. *Midterm Review of Strategy 2020: Meeting the Challenges of a Transforming Asia and Pacific*. Manila.

<sup>12</sup> ADB. 2010. *Sustainable Transport Initiative: Operational Plan*. Manila. p. 20.

recommendations relating to construction safety, and will be disseminated during the train-the-trainer courses.

- (v) All knowledge products—e.g., reports, training materials, and best practice guides—will be disseminated and made available to the public. In developing knowledge products, care will be taken to build on, and avoid duplication of, existing guidelines produced by agencies such as the Global Road Safety Partnership, the UN Economic and Social Commission for Asia and the Pacific, WHO, the World Road Association, the World Bank, and ADB.

15. Risks and assumptions have been identified as part of the design and monitoring framework for this TA. The main risks are (i) failure of governments to adopt road safety policies and strategies or to report progress toward road safety targets; and (ii) lack of commitment to road safety from police forces, combined with failure of the public to report road collisions, leads to poor availability and/or quality of collision data. The main assumptions are (i) governments proactively take effort to reduce road casualties and provide adequate funding for road safety activities, and (ii) CAREC member countries send appropriate personnel to arranged activities.

16. Activities will be coordinated with relevant international development agencies, agencies in CAREC member countries, civil society and other stakeholders to avoid overlapping and to maximize the effectiveness of the project.

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

17. The TA is estimated to cost \$1,500,000, which will be financed on a grant basis by ADB's Technical Assistance Special Fund (TASF-V).

### **D. Implementation Arrangements**

18. ADB will be the executing agency for the TA, with ADB's Central and West Asia Department as the focal point.<sup>13</sup>

19. The TA will be implemented over 36 months, from January 2015 to January 2018. An international firm (international, 20 person-months, intermittent) will be engaged to (i) produce a CAREC road safety strategy, and (ii) produce guidelines on incorporating road safety into CAREC road projects. The firm will be engaged using quality- and cost-based selection with a quality–cost ratio of 90:10. A simplified technical proposal will be used for selection.

20. In addition, the TA will seek to mobilize and engage individual international and national consultants to strengthen the capacity of CAREC member countries to manage and coordinate road safety activities, including improved data collection, road collision research, engineering, education, and enforcement capacity. Individual experts are to be recruited, as individual experience and qualifications are the main requirements for the positions. A senior road safety consultant (international, 12 person-months, intermittent) will work over the 36-month TA period to assist ADB staff in overall implementation of the TA. In addition, road safety consultants

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<sup>13</sup> The Transport and Communications Division of ADB's Central and West Asia Department will be in charge of the TA and will be primarily responsible for implementation oversight, accountability for outputs, and communication with consultants and stakeholders. The Transport and Communications Division of ADB's East Asia Department will assist the Transport and Communications Division of ADB's Central and West Asia Department with its duties, playing a key role relating to communication with stakeholders in Mongolia; Inner Mongolia Autonomous Region, PRC; and Xinjiang Uyghur Autonomous Region, PRC, which are under ADB's East Asia Department's coverage. ADB's Regional and Sustainable Development Department will also assist with the TA.



(international, 8 person-months, intermittent) will be engaged on a short-term basis to assist the senior road safety consultant in (i) implementing road safety improvement activities and reviewing their progress; and (ii) designing and organizing workshops and training courses, including all necessary materials (e.g., training manuals, best practice guides, and reports). National road safety consultants (20 person-months, intermittent), expected to be based in CAREC member countries, will provide organizational and administrative support for overall coordination to implement activities in their respective countries.

21. All consultants will be recruited in accordance with ADB's Guidelines on the Use of Consultants (2013, as amended from time to time). Proceeds of the TA will be disbursed in accordance with ADB's *Technical Assistance Disbursement Handbook* (2010, as amended from time to time). Lump-sum payments and/or output-based contracts will be considered for consulting services under the TA.

22. Dissemination of outputs will be a key feature of the TA. The senior international road safety consultant will prepare a knowledge dissemination strategy that will list all knowledge products to be produced as part of the TA, and for each product decide on the optimal dissemination method (e.g., website, peer-reviewed journal, ADB publication).

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

23. The President, acting under the authority delegated by the Board, has approved the provision of technical assistance not exceeding the equivalent of \$1,500,000 on a grant basis for Enhancing Road Safety for Central Asia Regional Economic Cooperation Member Countries, and hereby reports this action to the Board.

## DESIGN AND MONITORING FRAMEWORK

<b>Design Summary</b>	<b>Performance Targets and Indicators with Baselines</b>	<b>Data Sources and Reporting Mechanisms</b>	<b>Assumptions and Risks</b>
<b>Impact</b> Improvements in road safety performance in CAREC member countries	By 2020: Number of fatalities per 100,000 population reduced by on average 10% in CAREC member countries by 2020 (2010 baseline)	World Health Organization global status report on road safety  World Bank World Development Indicators	<b>Assumption</b> Governments proactively take effort to reduce road casualties and provide adequate funding for road safety activities
<b>Outcome</b> Strengthened capacity of CAREC governments to identify and address key road safety issues in their respective countries	By 2018: Lead road safety agencies designated in at least eight CAREC member countries  CAREC road safety monitoring and reporting system functioning	CAREC Transport and Trade Facilitation Strategy 2020 progress reports	<b>Risk</b> Failure of governments to adopt road safety policies and/or strategies or to report progress toward road safety targets
<b>Outputs</b> 1. CAREC road safety strategy published	By 2016: CAREC road safety strategy endorsed by CAREC TSCC	CAREC Transport and Trade Facilitation Strategy 2020 progress reports  Consultants' progress reports	
2. Strengthened capacity of CAREC member countries to manage and coordinate road safety activities, including improved data collection and road collision research, improved engineering, education, and enforcement capacity	By 2017: At least 20 persons trained in best practices in (i) road safety data systems and research, (ii) road safety engineering, (iii) road safety education and awareness, and (iv) road safety enforcement  At least three national courses held in (i) road safety data systems and research; (ii) road safety engineering; and (iii) road safety enforcement, with the assistance of newly-trained trainers	CAREC Transport and Trade Facilitation Strategy 2020 progress reports  Consultants' progress reports	<b>Assumption</b> CAREC member countries send appropriate personnel to arranged activities  <b>Risk</b> Lack of commitment to road safety from police forces, combined with failure of public to report road collisions, leads to poor availability and/or quality of collision data
3. Integration of road safety evaluation tools into CAREC road projects	By 2016: CAREC TSCC approved guidelines on incorporating good practice in road safety in the design and construction of CAREC road projects	CAREC Transport and Trade Facilitation Strategy 2020 progress reports  Consultants' progress reports	

<b>Activities with Milestones</b>	<b>Inputs</b>
<p><b>1. CAREC road safety strategy published</b></p> <p>1.1 Produce a knowledge product reviewing road safety performance of CAREC member countries (by January 2016)</p> <p>1.2 Produce draft CAREC road safety strategy for review of CAREC TSCC (by June 2016)</p> <p>1.3 Finalize CAREC road safety strategy and present to CAREC TSCC for endorsement (by December 2016)</p> <p><b>2. Strengthened capacity of CAREC member countries to manage and coordinate road safety activities, including improved data collection and road collision research, improved engineering, education, and enforcement capacity</b></p> <p>2.1 Conduct workshop on management and coordination of road safety activities (by December 2016)</p> <p>2.2 Provide training on developing national road safety education and awareness campaigns (by December 2016)</p> <p>2.3 Conduct train-the-trainer courses on best practice in (i) road safety data systems and research, (ii) road safety engineering, and (iii) enforcement (by December 2016)</p> <p>2.4 Provide national training on best practice in (i) road safety data systems and research, (ii) road safety engineering, and (iii) enforcement in at least three CAREC member countries (by December 2017)</p> <p>2.5 Produce training material on (i) road safety data systems and research, (ii) road safety engineering, and (iii) enforcement (by December 2016)</p> <p>2.6 Disseminate all training materials and reports produced as part of the project (by December 2017)</p> <p><b>3. Integration of road safety evaluation tools into CAREC road projects</b></p> <p>3.1 Produce draft guidelines on incorporating good practice in road safety in design and construction of CAREC road projects (by July 2016)</p> <p>3.2 Finalize guidelines and present to CAREC TSCC for endorsement (by December 2016)</p>	<p><b>ADB: Technical Assistance Special Fund (TASF-V)</b> <b>\$1,500,000</b></p>

ADB = Asian Development Bank, CAREC = Central Asia Regional Economic Cooperation, TSCC = Transport Sector Coordinating Committee.

Source: Asian Development Bank.

**COST ESTIMATES AND FINANCING PLAN**  
(\$'000)

Item	Amount
<b>Asian Development Bank<sup>a</sup></b>	
1. Consultants	
a. Remuneration and per diem	
i. International consultants <sup>b</sup>	898.8
ii. National consultants	84.0
b. International and local travel	200.0
c. Reports and communications	20.0
2. Equipment <sup>c</sup>	10.0
3. Training, seminars, and conferences <sup>d</sup>	
a. Facilitators	50.0
b. Training program	100.0
4. Surveys	10.0
5. Miscellaneous administration and support costs	15.0
6. Representative for contract negotiations	5.0
7. Contingencies	107.2
<b>Total</b>	<b>1,500.0</b>

<sup>a</sup> Financed by the Asian Development Bank's Technical Assistance Special Fund (TASF-V).

<sup>b</sup> This comprises (i) 20 person-months for an international road safety firm, and (ii) 20 person-months of individual international consultants.

<sup>c</sup> Equipment to be procured may include printer, photocopier, camera, and laptop computers. These assets will be turned over to the executing agency upon completion of the technical assistance.

<sup>d</sup> Includes representation expenses of \$5,000.

Source: Asian Development Bank estimates.

## OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

1. Under the supervision of the Asian Development Bank (ADB) staff who will oversee the technical assistance (TA) implementation, an international firm will be recruited to (i) review road safety in the Central Asia Regional Economic Cooperation (CAREC) region, (ii) produce a road safety strategy for CAREC member countries, and (iii) produce guidelines on incorporating road safety into CAREC projects.

2. In addition, a total of 40 person-months of individual consultants (20 person-months of international consultants and 20 person-months of national consultants) will be engaged to provide capacity development services relating to (i) road safety collision data, analysis, and research; (ii) road safety engineering; (iii) enforcement of traffic laws; (iv) road safety education and awareness; and (v) management and coordination of road safety activities. These consultants will report to the ADB project team leader.

### A. International Road Safety Firm

3. A reputable consulting firm or research institute with specialists in road safety (international, 20 person-months, intermittent) will be engaged. The team will include a road safety policy expert (international, 10 person-months, intermittent); economist (international, 3 person-months, intermittent); and road safety engineer (international, 7 person-months, intermittent). The objectives are (i) to conduct a strategic analysis of road safety in the CAREC region, including the production of a knowledge product on road safety in the CAREC region; (ii) to produce a road safety strategy for the CAREC region (to include an action plan on road safety); and (iii) to produce guidelines on incorporating road safety into CAREC road projects. The team will have extensive knowledge of, and in-depth working experience in, road safety issues in general and more specifically pertaining to ADB developing member countries (DMCs) and ideally the CAREC region. The international firm will work closely with ADB, participating governments and institutions, the private sector, and other development partners in furthering road safety throughout the region. They will also be expected to coordinate actions with other national, regional, and international agencies, and road safety organizations (e.g., the Global Road Safety Partnership, the United Nations Economic and Social Commission for Asia and the Pacific, WHO, the World Bank, and the World Road Association) undertaking similar work in participating countries. The international firm will be guided by, and report to, the ADB project team leader. The scope of services required from each team member is outlined below.

4. **Team leader and road safety policy expert.** The team leader (international, 10 person-months, intermittent) will have extensive knowledge of, and in-depth working experience in, road safety policy. The team leader will take primary responsibility for all deliverables to be produced by the international firm. Under the ADB staff's supervision, the team leader will work closely with participating governments and institutions, the private sector, and other development partners in furthering road safety throughout the region. The team leader will have an undergraduate degree and preferably a graduate degree in a relevant field (e.g., civil engineering or economics); at least 10 years of experience in working in road safety, with a strong focus on road safety policy; and strong writing skills demonstrated through authored work or other written work. Work experience in ADB DMCs and CAREC member countries is preferred. The team leader will have the following main responsibilities:

- (i) Assist ADB staff in effective implementation of the TA, providing technical advice and direction on all matters relating to implementation.

- (ii) Produce a knowledge product reviewing the overall state of road safety in the CAREC region and making recommendations regarding improving road safety in the CAREC region. To achieve this, the team leader will (a) obtain and review all necessary information in relation to crash data, road safety research, road safety reports, existing proposals, strategies, and action plans in participating countries; (b) conduct interviews with key road safety contacts in CAREC member countries; and (c) provide associated road safety assessment and analysis. The team leader will then identify gaps, deficiencies, and potential improvements, and as part of the knowledge product prepare a set of priority recommendations for review and in principle approval by the CAREC Transport Sector Coordinating Committee (TSCC). These should include identification of road safety interventions on principal designated CAREC transport corridors.
- (iii) Take primary responsibility for producing a CAREC road safety strategy (including an action plan on road safety), outlining recommended actions to be taken by CAREC member countries to improve road safety. The team leader will take primary responsibility for the preparation of a draft CAREC road safety strategy, and present it to the CAREC TSCC for consideration. The team leader will produce a final version taking into account feedback received.
- (iv) Assist in the production of guidelines on incorporating road safety into CAREC road projects, reviewing inputs and drafts from the economist and road safety engineer, and taking overall responsibility for timely delivery of a quality product.
- (v) Prepare and submit to ADB for approval an inception report, finalizing the draft based on comments received.
- (vi) Prepare monthly and quarterly progress reports on TA progress, following the monitoring frameworks and performance indicators developed; and make presentations to CAREC TSCC meetings on TA progress, as and when requested.
- (vii) Prepare a detailed plan for the production and dissemination of knowledge products under this TA.
- (viii) Prepare a final report documenting work undertaken as part of the TA, highlighting potential areas where further work is needed.

5. **Economist.** The economist (international, 3 person-months, intermittent) will have extensive knowledge of, and in-depth working experience in, transport and road safety. The expert will have an undergraduate degree and preferably a graduate degree in economics; at least 10 years of experience working on transport and/or road safety; and strong writing skills demonstrated through authored work or other written work. Work experience in ADB DMCs and CAREC member countries is preferred. The economist will have the following main responsibilities:

- (i) Assist the team leader with strategic analysis of existing road safety conditions in CAREC member countries and the identification of gaps, deficiencies, and potential road safety improvements.
- (ii) Assist the team leader with the production of a road safety strategy, ensuring that all recommendations in the strategy represent value for money.
- (iii) Assist the road safety engineer with the production of guidelines on incorporating road safety into CAREC projects, assisting in the development of road safety evaluation tools.
- (iv) Assist the team leader with the inception report, monthly and quarterly progress reports, and final report as needed.

- (v) Assist the team leader with the production of a knowledge product on road safety in CAREC member countries.

6. **Road safety engineer.** The road safety engineer (international, 7 person-months, intermittent) will have extensive knowledge of, and in-depth working experience in, road safety. The engineer will have an undergraduate degree and preferably a graduate degree in civil engineering (or other relevant subject), at least 10 years of experience in working on transport and road safety, and strong writing skills demonstrated through authored work or other written work. Work experience in ADB DMCs and CAREC member countries is preferred. The engineer will have the following main responsibilities:

- (i) Production of guidelines on incorporating road safety into CAREC road projects. The guidelines are to include recommendations on minimum standards for road safety on CAREC corridors, differentiated by road type (i.e., motorway, dual carriageway, two-lane road); traffic flow; and other relevant factors (e.g., extent of urbanization, whether the road is along the existing alignment). The guidelines will also consider minimum safety requirements during construction and will include a series of road safety tools (e.g., checklists, spreadsheets) produced to assist ADB officers and CAREC member countries to identify potential road safety interventions for each CAREC road project.
- (ii) Assist the team leader with strategic analysis of existing road safety conditions in CAREC member countries and the identification of gaps, deficiencies, and potential road safety improvements.
- (iii) Assist the team leader with the production of a road safety strategy, ensuring that all recommendations in strategy represent value for money.
- (iv) Assist the team leader with the inception report, monthly and quarterly progress reports, and final report as needed.
- (v) Assist the team leader with the production of a knowledge product on road safety in CAREC member countries.

## B. Individual Road Safety Consultants

7. **Senior road safety consultant.** The senior road safety consultant (international, 12 person-months, intermittent) will have extensive knowledge of, and in-depth working experience in, road safety. Under the ADB staff's supervision, the consultant will work closely with participating governments and institutions, the private sector, and other development partners in furthering road safety throughout the region. The consultant will have an undergraduate degree and preferably a graduate degree in a relevant field (e.g., civil engineering or economics); at least 10 years of experience working in road safety; and strong writing skills demonstrated through authored work or other written work. Work experience in ADB DMCs and CAREC member countries is preferred. The consultant will have the following main responsibilities:

- (i) Assist ADB staff in effective implementation of the TA, providing technical advice and direction on all matters.
- (ii) Identify areas in the road safety field for which participating countries need training to strengthen their institutional capacities.
- (iii) Facilitate the selection, and supervise the progress, of both individual international and national consultants who will assist with TA implementation.
- (iv) Prepare annual TA work plans, outlining both the tasks accomplished to date and the tasks scheduled to be performed in the forthcoming year.

- (v) Collect data on safety in participating countries and produce a report on the state of, and required future interventions in, road safety.
- (vi) Prepare a detailed plan for the production and dissemination of knowledge products produced as part of this TA.
- (vii) Establish a monitoring framework and suitable performance indicators that can be used to assess, and report on, progress on implementing the TA's outputs.
- (viii) Prepare monthly and quarterly progress reports following the monitoring frameworks and performance indicators, and make presentations on TA progress to CAREC TSCC meetings, as and when requested.
- (ix) Assist participating countries in defining national road safety strategies and associated action plans.
- (x) Assist in the identification, design, and execution of pilot road safety projects.
- (xi) Liaise with participating countries' governments, the private sector, international agencies, and nongovernment organizations in the design and implementation of a series of training courses, at regional and/or subregional levels, principally in the form of train-the-trainers courses, on the management and coordination of road safety activities, data collection and road safety research, road safety engineering, traffic law enforcement, and road safety publicity campaigns. Produce training materials necessary for such courses and, with the support of national and international consultants, facilitate the provision of such courses by providing administrative and organizational support, as required.
- (xii) Identify organizations (e.g., universities, research institutes) in participating countries that could facilitate regional workshops and training sessions and, in the longer term, which may develop the skills and expertise to ensure continuity of the TA outputs.
- (xiii) With assistance from the team of international and national consultants, prepare a final report documenting work undertaken under the TA, highlighting areas where further work is needed.

8. **Short-term road safety consultants.** Throughout the TA, a limited number of short-term consultants (international, 8 person-months, intermittent) will be required with expertise in specific aspects of road safety, e.g., road safety management, data and analysis, engineering, enforcement, urban road safety, and education. The senior road safety consultant will be responsible for identifying the specializations required, producing detailed terms of reference for each position, and assisting with recruitment of consultants. The short-term international road safety consultants will have an undergraduate degree and preferably a graduate degree in a relevant field (e.g., civil engineering or economics); at least 10 years of experience working in road safety; and strong writing skills demonstrated through authored work or other written work. Work experience in ADB DMCs and CAREC member countries is preferred. Responsibilities include the following:

- (i) Assist the senior road safety consultant with various administrative requirements (e.g., compilation of monthly and quarterly progress reports and final TA reports).
- (ii) Assist the senior road safety consultant in organizing regional and subregional workshops and training activities, including developing the required training material (e.g., PowerPoint presentations and papers) and delivering relevant sections of the training.
- (iii) Assist the senior road safety consultant in the identification, design, and execution of pilot road safety projects.
- (iv) Prepare knowledge products, as agreed with the senior road safety consultant and ADB.



- (v) Do any other tasks the senior road safety consultant deems necessary for successful completion of the TA.

9. **National road safety consultants.** It is envisaged that national consultants (individual, 20-person months, intermittent) will be recruited to provide administrative support to the TA and to assist in organizing workshops and training sessions, facilitating liaison with entities in the participating countries to ensure efficient delivery of TA. The number of national consultants, the number of person-months allocated to each, and the required experience and qualifications will be determined upon completion of the first annual plan for the TA. The national road safety consultants will have an undergraduate degree and preferably a graduate degree in a relevant field (e.g., civil engineering or economics); at least 5 years of relevant experience; and strong writing skills. Each national consultant recruited will report to the ADB staff and it is envisaged that they will have the following general responsibilities (with specific responsibilities to be determined at a later stage):

- (i) Provide intermittent consultancy, research inputs, and administrative support, as required, to deliver the TA successfully.
- (ii) Complete all required deliverables in a timely manner in consultation with the team leader.
- (iii) Assist with the compilation of required administrative outputs, including monthly and quarterly progress reports and annual plans.
- (iv) Assist in the compilation of materials needed to complete training courses undertaken as part of the TA.
- (v) Assist international consultants in the production of various knowledge products and their adaptation to each country.
- (vi) Attend, provide administrative support for, and, if agreed with the team leader, deliver training courses at regional, subregional, or national level.
- (vii) Assist in the identification, design, and execution of pilot road safety projects.
- (viii) Translate training materials into local languages, and organize and assist in the delivery of national or subregional train-the-trainer courses.
- (ix) Provide a summary report after each course, listing the schedule, attendees, and experience of participants; and submit digital files to the team leader, including papers and presentations delivered at training sessions.
- (x) Conduct any other tasks the team leader deems necessary for effective TA implementation.