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# Implementation of Sustainable Transport Initiative: Mainstreaming Road Safety in ADB Operations Action Plan

Asian Development Bank

## ABBREVIATIONS

AusAID	–	Australian International Aid Agency
COBP	–	country operations business plan
DFID	–	Department for International Development (UK)
DMC	–	developing member country
ECMT	–	European Council of Ministers of Transport
GMCRS	–	Global Ministerial Conference on Road Safety
GRSF	–	Global Road Safety Facility
LEAP	–	Law Enforcement Advisory Panel
IRAP	–	International Road Assessment Programme
MDB	–	multilateral development bank
PATA	–	policy and advisory technical assistance
PPTA	–	project preparatory technical assistance
RETA	–	Regional Technical Assistance
ROADPOL	–	network of traffic police agencies providing advice to police forces
RSA	–	road safety audit
RSG	–	road safety group
SiDA	–	Swedish International Development agency
STPF	–	Sustainable Transport Partnership Facility
STI	–	Sustainable Transport Initiative
TISPOL	–	Network of traffic police forces providing advice to Police Forces
TCoP	–	Transport Community of Practice
OECD	–	Organization for Economic Cooperation and Development
UN	–	United Nations
WHO	–	World Health Organization

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## I. BACKGROUND

### A. Global Problem Needing Urgent Action

1. Each year road crashes kill around 1.3 million people and injure or disable as many as 50 million persons. Road crashes are now the leading cause of premature death globally for children and young people aged 5–29 years. Studies by the World Health Organization (WHO) have also shown that 90% of road deaths are in low and medium income countries although they only have 50% of the world's motorized vehicle fleet. On current trends, road crash deaths are likely to increase by 80% by 2020 and will become the 5<sup>th</sup> leading cause of death in all age groups globally by 2030, ascending from 9<sup>th</sup> place in 2004.<sup>1</sup> Road crashes already kill more people than malaria. Based on current trends, within the next 20 years they will kill twice as many people annually as HIV/AIDS and four times as many as tuberculosis.

2. Recognizing the alarming situation with road safety, especially in low- and mid-income countries, ministers and senior government officials from 147 countries, representatives of international, regional and sub-regional governmental and nongovernmental organizations, donors and private sector organizations gathered together in Moscow in November 2009 for the First Global Ministerial Conference on Road Safety (GMCRS) and called upon the UN to take urgent action.

3. In response to this call, the UN General Assembly acknowledged the tremendous global burden of road casualties with a broad range of social and economic consequences, and proclaimed the period 2011-2020, commencing on May 2011, as the Decade of Action for Road Safety.<sup>2</sup> The goal of the global Decade of Action is to stabilize and then reduce the forecast level of road traffic fatalities around the world by increasing road safety activities conducted at the national, regional and global levels. The UN Secretary General has called upon all UN agencies and development institutions to assist in addressing this urgent and growing problem. A Global Plan<sup>3</sup> has been prepared for the Decade of Action to provide a template of the sorts of activities that all countries should endeavor to carry out to improve road safety. The UN has also mandated WHO to take responsibility for addressing road safety as a major health problem and has added road accidents to malaria, HIV/AIDS and tuberculosis as the most important global health concerns facing humanity.

4. Recognizing the extent of the road safety problem in developing countries and the huge potential for interventions to alleviate this problem, the ADB and other multilateral development banks (MDBs)<sup>4</sup> have (i) committed to establishing a Shared Approach to Managing Road Safety in support of achieving the goal of the Decade of Action (Appendix 1), (ii) established a working group on road safety to share best practices, coordinate efforts, and establish partnerships to road safety work, and (iii) started to explore ways of attracting additional dedicated financing for road safety.

### B. Road Safety Problem and its Impact in the Asia Pacific Region

5. The road safety problem is especially serious in developing countries in the Asia Pacific region. In most of ADB's developing member countries (DMCs) the number of road accidents is

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<sup>1</sup> World Health Organization (WHO). 2009. *Global Status Report of Road Safety –Time for Action*. Geneva: WHO.

<sup>2</sup> United Nations (UN). 2010. *General Assembly Resolution 64.255 (Improving Global Road Safety)*. New York: UN.

<sup>3</sup> WHO and UNSRC. 2010. *Global Plan for the Decade of Action for Road Safety 2011-2020*. New York: UN.

<sup>4</sup> These are African Development Bank, Asian Development Bank, European Bank for Reconstruction and Development, European Investment Bank, Inter-American Development Bank, Islamic Development Bank, and the World Bank.

rising. The rapid growth in motorcycles and in the vehicle fleet in general is creating severe strains on existing road networks that typically were created without incorporation of road safety features. It is also putting strain on road agencies, many of which lack road safety management capacity. This contributes to significantly increased risk for all road users – especially vulnerable road users who according to WHO surveys already account for 50-75% of road fatalities across the region.

6. These huge economic and human losses are an impediment to economic growth and development across the region and are now recognized as a major health, poverty and economic development problem. (See Box 1 and Appendix 2).

### **Box 1: Road Safety is an Economic, Poverty and Health Problem**

#### **Economic problem**

- ADB's DMCs are losing at least \$96 billion every year due to road accidents (based on 2% of GDP in 2007)
- Economic losses are greater than the total development aid received annually in the region
- Road crashes undoubtedly inhibiting economic development in Asia and Pacific region

#### **Poverty and social development problem**

- Road deaths are concentrated among vulnerable road users who are generally poorer households (50% in Western Asia/Pacific and 75% in South Asia)
- 7 out of 10 poor families suffer decreased income after a death or disability
- 2/3 of families have to arrange loans to cover loss of income from someone killed or disabled
- Many families are driven into a spiral of poverty or debt as a result of road accidents
- Women of families affected by road accidents typically become care givers of disabled family members and have less opportunities in life
- In the last 5 years, around 22 million families had someone killed or permanently disabled due to road accidents, causing severe financial strain and hardship, and in the next 5 years another 32 million families will be affected

#### **Health problem**

- Over 645,000 deaths and 30 million injuries every year
- Around 3.5 million deaths and 18 million permanently disabled in the last 5 years
- 2<sup>nd</sup> leading cause of death for 6-14 year olds
- Leading cause of death for 15-44 year olds (most productive age groups)
- WHO estimates that 25% of health budgets will need to be spent on road casualties by 2030
- Road deaths exceed those from malaria, and by 2030 will be double those from HIV/AIDS and four times those from tuberculosis

### **C. Road Casualties Are Preventable**

7. Well-documented experience of road safety work in OECD countries has shown that the gradual roll-out of road safety management systems since 1960s has reduced the annual number or rate of road fatalities by up to 3-5 times.<sup>5</sup> There is reliable evidence that investments in road

<sup>5</sup> E.g., the rate of roads fatalities in Canada (annual number of fatalities per 10,000 motor vehicles registered) has decreased from around 6.0 in 1965 to around 1.5 in 2000. In Japan, the annual number of fatalities decreased from 16,765 in 1970 to 4914 in 2009.

safety in DMCs can be very cost effective: some studies suggest that spending 10% of the current costs of road crashes on safety may prevent 70% of those costs in future.<sup>6</sup>

8. The philosophy behind road safety in OECD countries has gradually evolved. Before the 1960s, crashes were seen to be the result of human error and considered to be an inevitable cost of mobility which had to be tolerated. In the 1960s and 1970s, the “forgiving roadway/roadside” concept was adopted and widely implemented, resulting in significant reduction of the severity of crashes. This was followed by the subsequent concept of the “caring roadway” or “safe system approach”<sup>7</sup> which recognized that a successful road safety management system in a country should ensure the safety of the human, the vehicle, and the roadway as a system; and introduced a number of new tools and measures allowing for the proactive prevention of crashes as a complement to traditional, reactive techniques. Such a system not only minimized the consequences of crashes, but also supported proactive prevention measures to minimize and mitigate human error. In their recent joint statement on a Shared Approach to Managing Road Safety (Appendix 1), MDBs have recognized the relevance of the safe system approach to all countries irrespective of economic or road safety performance.

9. Many effective road safety tools, practices and measures (both engineering and non-engineering) have been developed, evaluated and successfully used to implement the safe system approach in developed countries.<sup>8,9,10</sup> For example, the Handbook of Road Safety Measures<sup>7</sup> lists 129 measures in 10 different areas of road safety work. Below are some illustrations of how road safety measures can significantly improve road safety and/or reduce severity of injury:<sup>11</sup>

- (i) The average reduction of annual fatal and injury crash frequency at road safety audited sites is almost 5 times higher than at comparable non audited sites;<sup>12</sup>
- (ii) Centerline rumble strips can reduce the frequency of head-on crashes by 21% when used on rural two-lane roads and reduce injury crashes by 30% if used on shoulders;<sup>13</sup>
- (iii) Energy-absorbing barrier end treatments reduce probability of fatalities in a crash by up to 78%, and injuries by up to 68%;<sup>14</sup>
- (iv) Introduction of a graduated licensing system (where additional restrictions are placed on novice drivers during their first 2 years of driving) can reduce fatal crashes by 7% to 35% across different countries, jurisdictions and target groups;<sup>15</sup>
- (v) Seat belt use reduces the risk of being killed in an accident for a driver and front seat passenger by 40% to 50% and for the back seat passengers by 25%;<sup>16</sup>
- (vi) Properly designed road safety mass media campaigns will result in an 8.5% reduction in crashes during the operation of the campaign rising to an average 14.8% reduction immediately following the campaign;<sup>17</sup>

<sup>6</sup> Ayati, E, Young, M. The cost effectiveness of investments in traffic safety projects in Iran. TES, September 2002.

<sup>7</sup> OECD. 2008. International Transport Forum (2008). *Towards Zero Ambitious Road Safety Targets and the Safe System Approach*, Joint Transport Research Centre, OECD/ITF. Paris: OECD.

<sup>8</sup> Elvik, R., Hoye, A., Vaa, T., Sorensen, M. 2009. *The Handbook of Road Safety Measures. Second Edition*, Emerald Group Publishing.

<sup>9</sup> American Association of State Highway and Transportation Officials, 2010. *Highway Safety Manual*.

<sup>10</sup> PIARC, 2003. *Road Safety Manual*.

<sup>11</sup> Specific effect of road safety countermeasures will vary across countries and jurisdictions. Dedicated research will be needed to identify effects of the road safety countermeasures in DMCs.

<sup>12</sup> Federal Highway Administration. 2007. *Road Safety Audit Guidelines*. Washington, DC.

<sup>13</sup> National Cooperative Highway Research Program(2005) *Research Results Digest 299*.

<sup>14</sup> Transport Canada, 2003. *Road Safety Benchmarks over Time*. Ottawa.

<sup>15</sup> Senserrick, T., and Whelan, M. 2003. Graduated Driver Licensing: Effectiveness of Systems & Individual Components. Monash University Accident Research Centre Report No. 209.

<sup>16</sup> Elvik, R, Vaa, T. 2001. *The Handbook of Road Safety Measures (Russian edition)*. Institute of Transport Economic. Norway.

<sup>17</sup> Delhomme, P. 1999. *Evaluated Road Safety Media Campaigns: an overview of 265 evaluated campaigns and some meta-analysis on accidents*.

- (vii) Decrease in ambulance waiting time from 11–20 minutes to 1–10 minutes range leads to an approximately 50% decrease in the risk of a fatality;<sup>18</sup> and
- (viii) Effective police enforcement of speeding, drink driving, helmet and seatbelt wearing can have dramatic effects in reducing road safety casualties.<sup>19</sup>

#### D. Road Safety in ADB Operations

10. There is a strong rationale for road safety to feature more prominently in ADB's operations: (i) it is a factor affecting poverty, health and the economy and therefore improving road safety in DMCs is directly supportive of ADB's overall goals in strategy 2020 (see Appendix 4), and (ii) ADB provides substantial financing for road infrastructure and this needs to be accompanied by effective support for road safety in order to realize the full potential contribution to development and poverty reduction. Improving road safety is also an area with good potential for adding value to ADB investments and it will assist countries to improve their economies by avoiding the high economic burden of road crashes.

11. Until now, most of ADB's support for road safety has been relatively small-scale and sporadic. It lacked the systematic, sustained approach needed to bring about a lasting improvement in road safety in DMCs. Limitations in ADB's past road safety assistance include:

- (i) Limited ADB capacity for policy dialogue with DMCs on road safety and for initiating, preparing and managing of road safety TAs and loan components;
- (ii) Absence of ADB policies and procedures for incorporating road safety throughout the ADB project cycle, providing guidance to staff, and incorporating safeguards to ensure road projects address associated road accident risks;
- (iii) Road safety share in ADB road projects rarely exceeds 1-2% of total project cost, which is far below the target of 10% recommended by the Global Commission for Road Safety and the newly published UN Decade of Action road safety plan;
- (iv) Road safety activities are implemented mainly through small road safety components of road infrastructure projects. As the components have mostly localized effects, the underlying and wide ranging systemic issues affecting road safety in DMCs are not addressed sufficiently. ADB has not yet financed standalone or sector-wide road safety projects or programs in DMCs;
- (v) Implementation of road safety support is often less effective because of limitations in the design of components and insufficient use of available tools such as road safety audits; and
- (vi) Due to the relatively low weight of road safety components in the total investment, they have often been treated by DMCs as a lower priority activity, remaining on the sidelines of the main investment, and often experiencing delay and lower than desired quality of implementation.

<sup>18</sup> Brown (1979) cited by Elvik and Vaa. 2001: *The Handbook of Road Safety Measures (Russian edition)*. Institute of Transport Economic, Norway.

<sup>19</sup> See WHO Good practice guidelines on speeding management, seatbelts, drunk-driving etc.

12. Highlights of past ADB's support for road safety are provided in Box 2.

### **Box 2: Past ADB Road Safety Support**

There have been three main categories of past ADB support for road safety in DMCs:

**1. Road safety component, engineering only (\$0.5-1 million)**

These have typically been included within road projects and focus on engineering-related road safety improvements, e.g., safety audits of hazardous locations, engineering design of safety improvement. They can lead to localized safety improvements and increase capacity in the executing agency but do little to strengthen overall capacity to address road safety problems.

**2. Road safety component, comprehensive (\$3–5 million)**

These have also been included within road projects and include a wider range of activities including some undertaken with other sectors. In Fiji, such support has included procurement of enforcement equipment and training for police, crash data system, traffic education of children, driver training/testing, vehicle roadworthiness testing, establishment of a national road safety council, training of a road safety unit within the public works department and safety engineering improvements on the major road network. Such projects help to develop local capability to address road safety and can lead to significant improvements in road safety (e.g. Fiji deaths and injuries were reduced by 50% over a 7 year period). They also help to build road safety capacity and address road safety in a more holistic manner.

**3. Regional and subregional technical assistance (RETA) (\$0.6-2 million)**

Such RETAs provide support for road safety in several countries and can benefit from synergies through countries sharing experience and working together. A RETA has assisted 10 ASEAN countries to develop individual road safety action plans and encouraged them to cooperate, coordinate and harmonize activities. These countries are now implementing the action plans and have a multisector, multicountry road safety working group that meets regularly. However, unless such RETAs are supported by subsequent road safety lending, they may not lead to lasting improvements.

## **E. Sustainable Transport Initiative and Development of First ADB Action Plan on Road Safety**

13. Through Strategy 2020, ADB has established three strategic agendas to guide its work up to the year 2020 - inclusive economic growth, environmentally sustainable growth, and regional integration.<sup>20</sup> The need for better transport is common to each of these agendas. Transport will therefore remain a major part of future ADB operations in infrastructure and one of its five core areas of focus. However, it has become clear that, alongside its beneficial contributions, transport can have negative side-effects and these need to be carefully avoided or mitigated if its full benefits are to be delivered to DMCs. ADB has established the Sustainable Transport Initiative (STI), to align its transport operations with Strategy 2020 and to provide technical and other resources to build up a portfolio of enhanced lending and technical assistance to support sustainable transport. The establishing of the STI reflects changes in the type of transport assistance that DMCs require, and commits ADB to proactively assisting DMCs to develop transport that is more sustainable—economically, socially and environmentally.

<sup>20</sup> ADB, 2008. *Strategy 2020: The Long-Term Strategic Framework of the Asian Development Bank 2008–2020*. Manila.

14. The STI has identified four new focus areas to scale up in ADB operations to support sustainable transport in DMCs: (i) urban transport; (ii) climate change and energy efficiency; (iii) regional cooperation and integration; and (iv) road safety and social sustainability.

15. The STI recognizes that ADB's regional departments need to strengthen their expertise in these new focus areas. It is planned that for the period 2010–12, the STI will establish an initial core group of ADB staff, supplemented by external experts, to assist regional departments. They will initially be based in the Regional Sustainable Infrastructure Division (RSID) but most of their time will be assigned to working for regional departments on sustainable transport operations. The core group will ensure that STI operational support is led and coordinated by ADB staff. It will draw upon additional specialized experts as needed to support individual sustainable transport operations and research on future opportunities.

16. In order to quickly begin scaling up ADB support for road safety, ADB's Transport Community of Practice (TCoP) has developed this road safety action plan.

## II. ACTION PLAN ON MAINSTREAMING ROAD SAFETY IN ADB OPERATIONS

### A. Impact and Outcome

17. The action plan will improve the way that ADB addresses road safety in its operations. The long term impact of the action plan will be a sustainable, effective, and cost-efficient improvement in road safety in DMCs. The immediate outcome will be improved ADB road safety capacity and an expanded portfolio of projects to support road safety in DMCs. The action plan will be updated regularly based on reviews of progress in implementation.

18. Implementation of the action plan will put ADB in a better position to assist individual DMCs and subregional groupings of DMCs in formulating and implementing country-specific road safety action plans and specific road safety components/projects, including standalone road safety investment projects.

### B. Key Areas for Action

19. Seven areas for action are identified as being critical for establishing a systematic, high quality and sustainable approach to addressing road safety in ADB operations, and for scaling up road safety work across the region. These are listed in Box 3.

#### Box 3: Key Areas for Action

##### ADB Operations

- Activity A: Strengthen ADB internal road safety capacities
- Activity B: Develop and operationalize procedures, guidelines and related tools
- Activity C: Identify opportunities for scaling up road safety in DMCs
- Activity D: Mainstream and strengthen road safety components
- Activity E: Establish standalone road safety pipelines

##### Coordination and Partnerships

- Activity F: Collaborate and coordinate with MDBs, donors and UN agencies to support the UN Decade of Action on Road Safety
- Activity G: Mobilize international organizations as partners in supporting road safety in Asia and Pacific region

## 1. ADB Operations

20. The seven areas for action are explained below:

### Activity A: Strengthen ADB Internal Road Safety Capacity

21. This is critical for the successful and timely implementation of all other aspects of the action plan.

22. Road safety is a specialized area of expertise, and a wealth of road safety methods and tools have been developed in over 50 years of road safety science in high-income countries. Proper integration of road safety into the project cycle requires a range of specialized road safety knowledge and experience (see Appendix 5) which existing ADB transport specialists currently do not have. Moreover, due to the lack of road safety experience and capacity in most DMCs, the proper preparation and implementation of road safety investments requires more input from ADB staff in preparation, monitoring, review and advisory support than in traditional areas of ADB transport operations. Accordingly, strengthening of the ADB internal road safety management capacities will need additional resources, both human and monetary to develop new skills and expertise in-house and to attract such expertise from the outside.

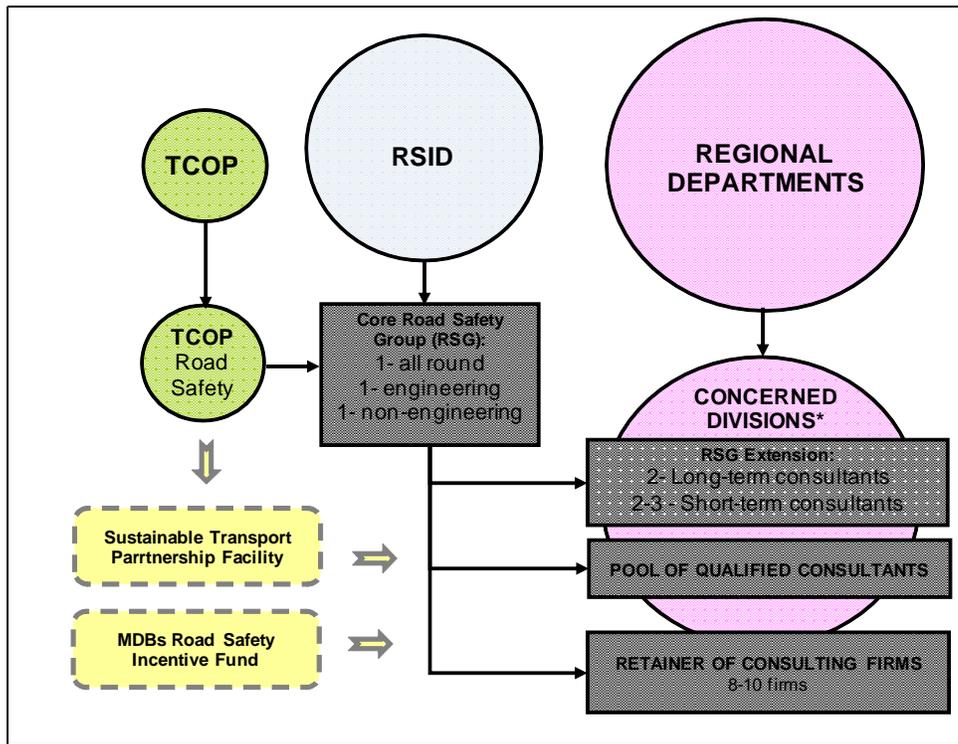
23. It is proposed that a Road Safety Group (RSG) be established. This will be located in RSID initially and will be guided by the TCoP advisory team on road safety. RSG will comprise a core group which will later be supplemented by an RSG extension through recruitment of specialist road safety consultants to work within regional departments to support operational staff<sup>21</sup>. The RSG core group will comprise (i) one lead road safety specialist with all-round knowledge of road safety as a group leader, (ii) one road safety expert specializing in engineering aspects of road safety, and (iii) one road safety expert specializing in non-engineering aspects of road safety such as police enforcement/legislation or driver and vehicle licensing issues. The skills mix may be altered periodically in line with needs. A pool of pre-qualified consulting firms and individual consultants will also be established to carry out projects as needed. Dedicated road safety funding may be provided from STI funds, such as under the Sustainable Transport Partnership Facility, from normal lending and TA operations, and/or from donor agencies supporting ADB road safety activities. Figure 1 illustrates the proposed arrangements and Appendix 5 provides more detail on the key characteristics of the RSG staffing, tasks and institutional arrangements proposed.

24. **The specific actions needed under Activity A to strengthen ADB road safety management capacity will include:**

- A1 Establishing the Road Safety Group
- A2 Launching systematic road safety training for ADB professional staff
- A3 Drawing and allocating STI funds and/or funds from donor agencies for road safety consultants to support the work of RSG and ADB staff
- A4 Creating a pool of ADB staff consultants to support road safety work in concerned divisions
- A5 Creating a retainer pool of pre-qualified road safety individuals and safety consulting firms for easier recruitment and quicker deployment.

<sup>21</sup> RSG, its extension and the pool of consultants will be rolled out in a phased manner. Specific targets are provided in Section III. Funding arrangements for the RSG and its extension are currently being explored. It is anticipated that initially RSG staffing will be provided through secondments. Further, MDBs have agreed in principle that a portion of the proposed MDB Road Safety Incentive Fund (Activity F) will be used to support managing of road safety activities by MDBs. Using RETA funding is another viable option.

**Figure 1: Proposed institutional arrangements for mainstreaming road safety in ADB operations**



\* Concerned divisions may include transport divisions, urban divisions related to urban transport, and resident missions

### **Activity B: Develop and Operationalize Procedures, Guidelines and Related Tools**

25. ADB has no prescribed procedures and guidelines for incorporating road safety in its transport operations. As a result, mission leaders/project officers lack incentives and guidance on how to incorporate road safety during country programming, project processing, implementation and evaluation. Guidance is needed on how existing road safety tools and processes can be incorporated into the project cycle, how non-engineering aspects can be addressed and how road safety management needs of DMCs can be assessed and strengthened. Guidance is also needed on how to identify and develop possible road safety components and what sorts of interventions may be appropriate at different stages of road safety development in a country and at different phases of the project cycle so they can be validated and adapted as needed.<sup>22</sup>

26. Although existing ADB documents on road safety<sup>23</sup> and on safety audit<sup>24</sup> do provide a general overview of the main points to consider, they were not designed to provide the types of detailed guidance and terms of reference needed by operations staff developing safety components and, in any case, ADB staff do not currently receive any training on the use of such guidelines.

27. As an immediate step, there is an urgent need to establish a central road safety resource of key road safety reference document, terms of reference, guidance and tools and this is something

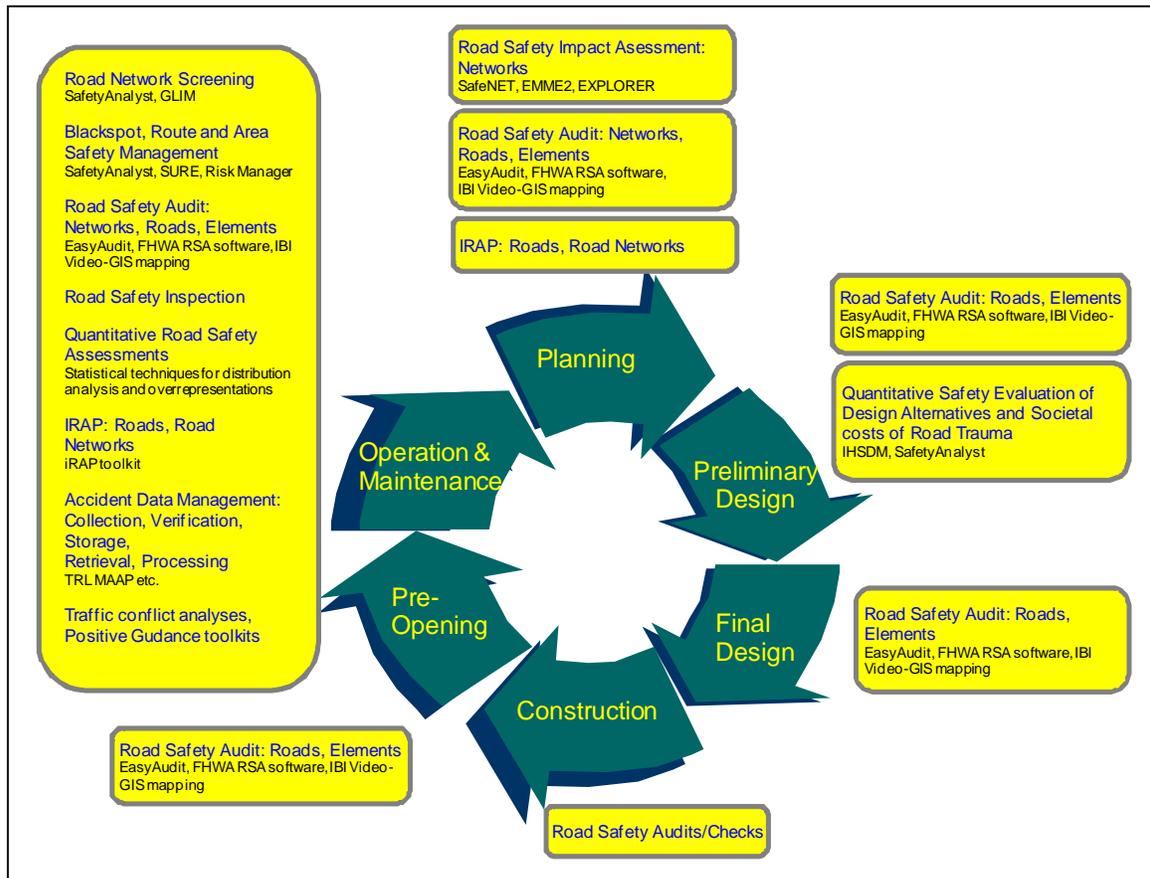
<sup>22</sup> For example it might be effective to pair the use of iRAP with subsequent safety auditing and engineering to ensure that iRAP recommendations are elaborated and prepared for implementation.

<sup>23</sup> ADB, Guidelines on road safety in Asia and Pacific region, Manila, 1997.

<sup>24</sup> ADB. 2003. *Operational Toolkit on Road Safety Audit for Road Projects*. Manila.

that the proposed RSG will establish as one of its first tasks. Figure 2 illustrates a range of tools that are used on infrastructure projects around the world to ensure that road safety issues are addressed effectively. It should be noted that not all of these would necessarily be applied or be appropriate for use on ADB projects. There may also be other tools and techniques (e.g. in police enforcement) with potential for application in DMCs and these too will be assessed.

**Figure 2: Road safety tools currently available for incorporation in road infrastructure project cycle**

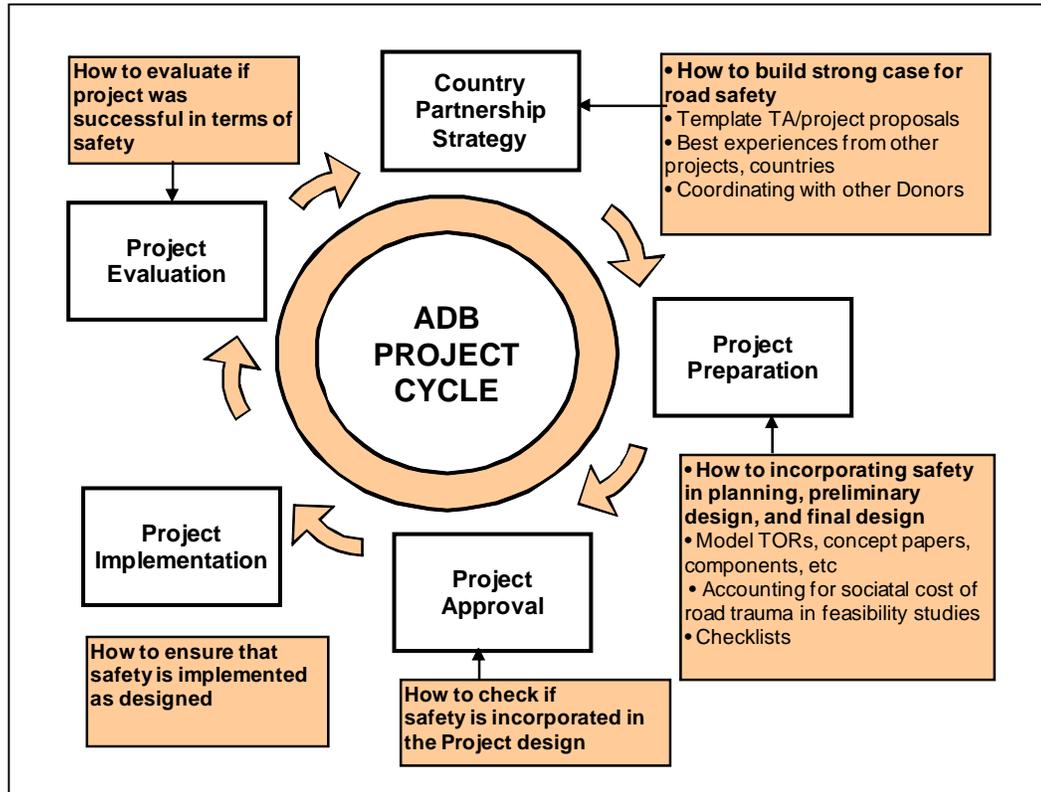


28. With inputs from specialist consultants, the RSG will identify which of such procedures and tools are most relevant for each stage of the ADB project cycle, determine how they should be modified to suit specific conditions in DMCs, and will oversee and supervise the development of relevant procedures and training to enable them to be implemented in ADB projects.<sup>25</sup> The procedures, guidelines and related tools will be field tested and operationalized with involvement of regional departments to ensure they are practical and suitable. This will result in more safety-conscious design of ADB projects and systematic incorporation of road safety into the planning, design, construction, operation and maintenance of road infrastructure projects.

29. Figure 3 illustrates the needs at each stage of the project cycle and the sorts of questions that need to be asked if road safety is to be integrated into projects. For each question suitable guidance, tools, checklists or other resources will be devised which can be easily applied by operational staff to make an assessment or reach a conclusion.

<sup>25</sup> Draft procedures and model documents incorporating road safety audits in the life cycle of ADB financed road infrastructure projects have already been developed by the TCoP. They will need to be further refined and incorporated in the ADB project cycle on a priority basis.

**Figure 3: Integration of road safety in the ADB project cycle**



30. All projects with potential to affect road safety will be closely checked during the TCoP sector-focused peer review process to ensure that they do not have a negative impact on road safety. Specific checklists to facilitate such review will be prepared. ADB will also exercise a proactive approach in its dialogue with DMCs by emphasizing the human and economic losses being incurred by the country due to road crashes and urging DMC authorities to increase their road safety efforts as part of their country's contribution to the UN Decade of Action. ADB guidelines will also need to take into account the requirements of sections 4.2.1 and 4.2.2 of the UN Decade of Action Global road safety plan which identify activities needed at national and international level so that ADB plays its full part in the wider global efforts to improve road safety.

31. **The following actions are proposed under Activity B to develop and operationalize procedures, guidelines and related tools:**

- B1 Develop procedures, guidelines and related tools for ADB project cycle
- B2 Operationalize procedures, guidelines and related tools, and
- B3 Develop performance measures and monitoring/reporting system for road safety projects

**Activity C: Identify Opportunities for Improving and Scaling Up Road Safety in DMCs**

32. The increasing international recognition of road safety as an urgent and growing worldwide problem warranting action at global level by the UN has made DMC governments much more aware and receptive to making investments in road safety and more willing to seek advice on such matters. In order to capitalize on this change of attitude and increased receptiveness to road safety interventions in DMCs, ADB should be more proactive in persuading countries to start

addressing their road safety issues. This can be done by developing, where possible, standalone road safety pipelines so that road safety activities can be strengthened in a phased and sustained manner initially with policy and advisory assistance TAs (PATAs) and project preparation TAs (PPTAs) followed by road safety investment projects. Alternatively where countries are not yet ready to move directly to individual standalone road safety pipelines, groups of countries could be helped to get started on more effective road safety activities through regional road safety TAs (RETAs) in the same way that the 10 ASEAN countries were assisted.

33. Such RETAs for example, could quickly help individual DMC or groups of DMCs to reach the first rung of the road safety ladder<sup>26</sup> and make them more capable, willing and ready to start road safety pipelines (PATA/CDTAs, PPTAs and investments). RETAs will also be beneficial for establishing a dialogue with the counterpart countries on how ADB could assist with the improvement of road safety, and what a scope of potential road safety pipeline for inclusion in COBPs could be. Road safety RETAs will need to be thoroughly conceptualized and carefully prepared and will need to incorporate lessons learned from past road safety RETAs.

34. Building a strong case for road safety action in a country will require analysis of country-specific data to highlight the road safety problem, identification of major risk factors, preparation of informed projections on how reduction of road casualties can be delivered and providing examples of best practices in engineering, police enforcement, driver and vehicle licensing etc. from other countries to show how success can be achieved. Road safety RETAs will include these tasks as part of the preparation of road safety action plans and programs in DMCs. For countries for which RETAs are not provided, these tasks could be managed by the RSG in consultation with the concerned divisions and with the input of road safety consultants and road safety consulting firms. Ideally, a central database could be established with key road safety information for each of the 42 DMCs and briefing notes could be prepared on each DMC to give concise information that the regional staff can use in their safety advocacy discussions with key organizations in that country.

**35. The following actions are proposed under Activity C to identify opportunities for improving and scaling up road safety in DMCs:**

- C1 Initiate road safety RETAs to conduct initial road safety diagnosis, prepare action plans for DMCs based on UN guidance for Decade of Action, and to prepare DMCs for launching standalone road safety pipelines (PATA/CDTA, PPTA and investment projects);
- C2 Build country-specific arguments and justification for improvement of road safety and include them in the discussions with DMCs on the Country Partnership Strategies and Country Operations Business Plans; and
- C3 Mainstream the concept of road safety pipelines (PATA, PPTA and Investment projects) for inclusion into Country Partnership Strategies and Country Operations Business Plans.

**Activity D: Mainstream and Strengthen Road Safety Components**

36. This activity will include both (i) reviving and strengthening of road safety components in selected ongoing investment projects and TAs through the improvement of their design, attracting additional funds and better monitoring; and (ii) mainstreaming road safety components in new projects, both in terms of their inclusion in the project design and increase in relative weight.

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<sup>26</sup> Progress and Improvement in safety can be likened to a ladder where the initial effort needed is just to get the key organizations to the lowest rungs of the ladder so that they can start climbing. Experience in many countries shows that if the key agencies and local professionals can be assisted to start effective activity, they soon start using internet and other sources to develop their knowledge and skills on safety issues and start climbing the safety ladder themselves to improve road safety activities in their countries.

37. Reviving and strengthening of the road safety components under ongoing projects will be done after taking an inventory of ADB projects and TAs with road safety components and potential for road safety content. The inventory will also identify lessons learned which can be then incorporated in the ADB procedures, guidelines, and tools; training of ADB staff; and design of road safety components for new projects.

38. Mainstreaming and increasing of the weight of road safety components in the design of new projects will be achieved mainly through the operationalization of procedures under Activity B, which will ensure that road safety components are included and properly designed. The RSG, with support from consultants, will help in the design of road safety components and provide advisory support as needed during implementation.

**39. The following actions are proposed under Activity D to mainstream and strengthen road safety components:**

- D1 Mainstream, improve design, and increase weight of road safety components in new projects
- D2 Conduct inventory of road safety components in ongoing projects and TAs
- D3 Identify measures to address the issues
- D4 Change the scope of components as necessary to enhance road safety.

#### **Activity E: Establish Standalone Road Safety Pipelines**

40. Road safety activities in ADB operations are currently implemented mainly through small road safety components within road infrastructure projects. There have so far been no standalone road safety investment projects. Road safety components have had limited impact. They generally do not provide sufficient support to address the wider road safety issues facing a country.

41. There is an urgent need to launch dedicated standalone road safety project pipelines which will include road safety RETAs, PATAs/CDTAs, and then PPTAs (for the investment preparation phase), followed by standalone road safety investment projects. The pipeline will ensure that by the time of completion of the PPTA, the standalone road safety investment is fully prepared and ready for implementation, including providing support for strengthening local capacity to manage such projects. The investment projects themselves will continue building road safety capacity. Road safety RETAs should be initiated as soon as possible as part of the effort to identify opportunities for improving and scaling up road safety in DMCs (Activity C) but these RETAs should not be seen a precondition for starting of the PATAs/CDTAs as part of standalone road safety pipelines. Where countries are ready to move forward with standalone road safety pipelines, they should be encouraged and assisted to do so. Others not yet at that stage can be assisted through RETAs until they are ready and willing to start standalone road safety pipelines.

42. It is critical that standalone road safety investment projects are well prepared. They will be most effective when the recipient country has already established some basic institutional capacity to manage road safety work and projects. These sorts of phased strengthening activities can be achieved via road safety RETAs, PATAs/CDTAs and PPTAs, and continue through the implementation of the investment projects. Key systems and elements in place to enable effective work in road safety may include, but not be limited to some or all of the functions listed below:<sup>27</sup>

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<sup>27</sup> These are the sorts of institutional strengthening activities that can be undertaken through the RETAs and during the initial PATA and PPTA phases of developing standalone road safety pipelines.

- (i) Assessment of strengths and weaknesses in road safety management capacities, critical review of all key road safety stakeholders, their responsibilities and activities
- (ii) Establishment and strengthening of capacities of a lead agency to manage and coordinate road safety work, including managing standalone road safety investment projects
- (iii) Cooperation and coordination mechanisms between the key agencies with road safety responsibilities
- (iv) Analysis and improvements to the road safety legislature
- (v) Analysis and mechanisms for road safety funding
- (vi) Road safety policies, business procedures and guidelines to incorporate road safety into the lifecycle of roads
- (vii) Establishing most effective road safety countermeasures and standards for implementation on a mass scale
- (viii) Improvements to the crash data collection, storage, retrieval and analyses systems
- (ix) Analyses of data, and identification of trends, road user groups at most risk, gender-disaggregated statistics, and the main risk factors contributing to road casualties.
- (x) Development of a basic action plan to strengthen institutional capacity and to address the high risk factors and the at risk road user groups
- (xi) Development of blueprint road safety investment projects and nationwide engineering and non-engineering road safety improvement programs. Development of pilot interventions and demonstration projects.
- (xii) Assessment of the societal costs of road casualties in the country/jurisdictions and mechanisms to incorporate such assessments in feasibility studies
- (xiii) Training of local specialists, both dedicated and on-the-job, in the preparation and implementation of road safety interventions.

43. It is essential that institutional strengthening in road safety within a country can be built up systematically, and that creation of institutional capacities and practical road safety work should be rolled out together to ensure that additional staff resources, skills, tools and systems are utilized in practical road safety work. In that sense, providing road safety pipelines over the course of the Decade of Action can be instrumental in both (i) ensuring the necessary level of impetus and sustainability for the institutional strengthening for road safety, and (ii) providing steady long term consulting support to ensure on-the-job support and transfer of road safety knowledge and skills to the local staff.

44. **The proposed specific actions in Activity E include:**

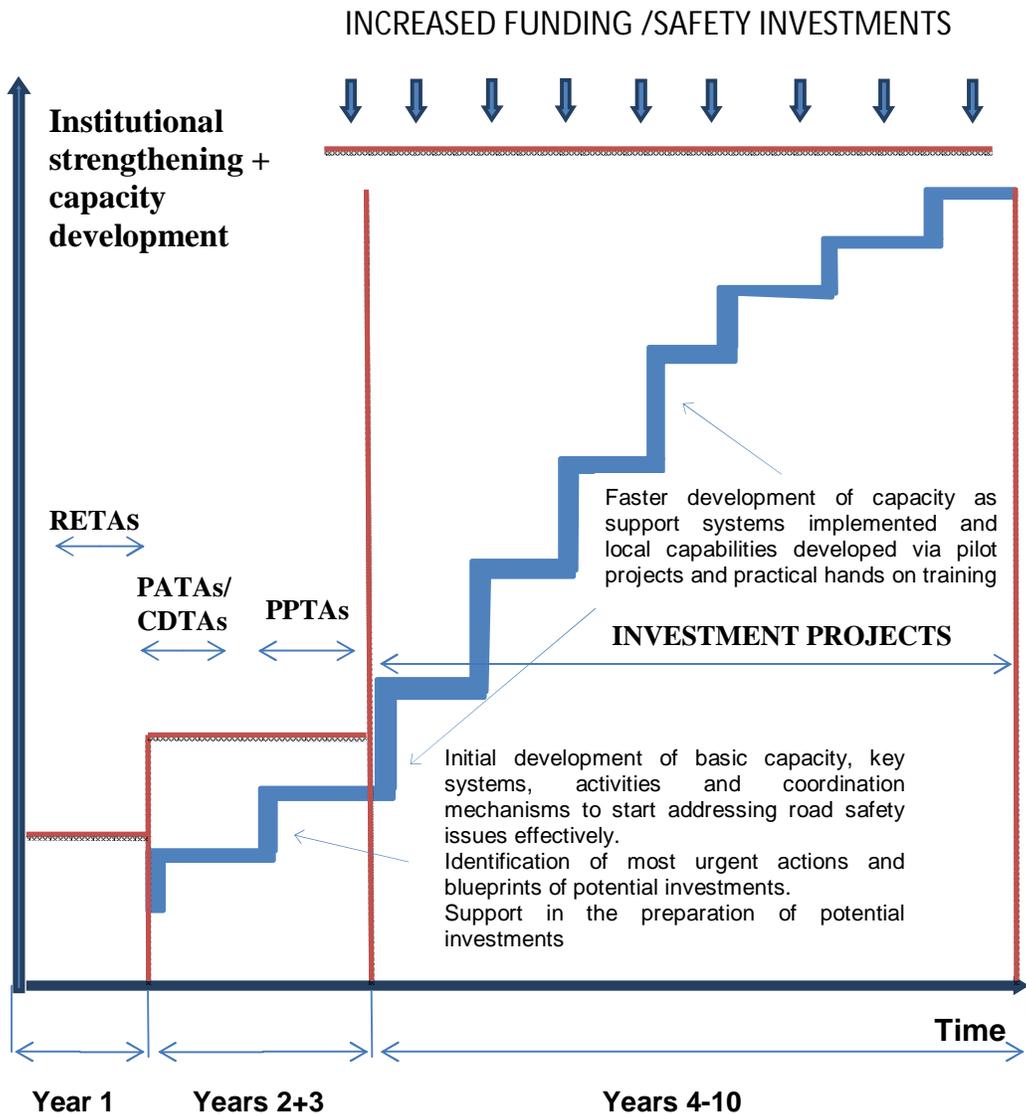
- E1 Launch PATAs/CDTAs to build initial road safety capacities and prepare blueprints of standalone road safety investment projects<sup>28</sup>
- E2 Launch PPTAs to further build road safety capacities and prepare standalone road safety investment projects
- E3 Launch standalone road safety investment projects

45. Road safety pipelines will play an important role to strengthen road safety management capacities and to implement improvements so that the countries can meet their obligations and make their contribution toward the UN Decade of Action regional casualty reduction targets. It is anticipated that the first 2-3 years will be spent in initial strengthening of local capacities in road safety management, engineering, police enforcement and other key areas necessary for effective

<sup>28</sup> Where countries are not yet ready and willing to start road safety PATAs/CDTAs, road safety RETAs should be initiated (Activity C) to conduct initial road safety diagnosis, prepare Action Plans for DMCs, and to prepare DMCs for launching standalone road safety pipelines.

implementation of action plans and in undertaking the activities to prepare road safety investment projects. The following years will be spent in implementing of standalone road safety investment projects which will include both investment and non-investment components in several key sectors. The timeline and scope of the pipelines is illustrated in Figure 3.

**Figure 3: Possible Timeline of Activities, Capacity Building and Funding**



## 2. Coordination and Partnerships

### Activity F: Collaborate and Coordinate with MDBs, Donors and UN Agencies to Support the UN Decade of Action on Road Safety

46. The UN Secretary General has assigned WHO to coordinate the global response to the road safety problem. UN regional economic commissions were called upon establishing casualty reduction targets for their regions, and all countries were called upon developing and implementing road safety action plans as part of the Decade of Action on road safety.

47. Since the Asia Pacific region contributes approximately half of global road deaths and injuries, ADB should endeavor to ensure that the region gets its fair share (around 50%) of the total resources raised to address global road safety problems, and assist with the administration of such funds as needed. This necessitates that ADB participates in the meetings of the MDBs, and other donors concerning the raising, allocating and administering of funds for road safety at the global level, and coordinating and orchestrating road safety activities. ADB should also participate in the meetings of UN Road Safety Collaboration (UNRSC) and other similar bodies as needed to supplement efforts in raising of road safety funds and coordinating road safety activities in the region.

48. In 2008-2009, ADB played an active role in the preparation of a Joint Statement on a Shared Approach to Managing Road Safety (Appendix 1). Currently, ADB is a member of the working group of MDBs that is coordinating efforts towards the implementation of the Joint Statement in support of the Decade of Action. Discussions are ongoing with MDBs on establishment of the Road Safety Incentive Fund (RSIF) to support scaling up road safety work in DMCs and associated road safety activities which could be offered to DMCs and funded by RSIF over the coming Decade of Action for Road Safety 2011-2020. This initiative is expected to put in action the provisions of the Joint Statement and is referred to as "MDB Road Safety Initiative" (RSI). MDBs, including ADB are currently working on the (i) estimates of the demand for funding and activities under RSI consistent with the UN Global Plan for the DoA, (ii) RSIF governance framework, and (iii) harmonized results framework for RSI. It is planned to launch this fund in the first half of 2012

49. A number of MDBs, bilateral donors and international NGOs are active in supporting road safety activities in the Asia Pacific Region.<sup>29</sup> Coordination of these efforts will allow more strategic use of available funds to ensure that maximum impact and synergy is achieved from road safety investments. Annual donor meetings with submission beforehand of a short summary of their recent and planned road safety activities via a periodic newsletter will keep all parties informed of each other's activities.

#### 50. The proposed specific actions for Activity F include:

- F1 Participate in meetings of MDBs, other donors, UNRSC and other similar bodies coordinating and orchestrating activities in relation to the Decade of Action on road safety to ensure that Asia-Pacific region gets a share of funding commensurate with its share of the global problem;
- F2 Coordinate with other MDBs in launching and implementing RSI;
- F3 Develop partnerships and co-financing of standalone road safety pipelines to support road safety investments in individual countries;

<sup>29</sup> This includes world bank, WHO, UN ESCAP, Bilateral development agencies and donors such as JICA and Ausaid and international charities and foundations active in supporting road safety such as FIA Foundation, Bloomberg Foundation, Global Helmet Vaccine Initiative etc. For convenience, these will be referred to in this section as Funders/Donors.

- F4 Prepare an inventory of Funders and Donors who are supporting road safety activities in Asia and Pacific region and catalogue their primary areas of activity;
- F5 Arrange annual meeting of Funders / Donors to coordinate current activities, future plans and safety initiatives; and
- F6 Initiate preparation and circulation (before each annual Funder /Donor meeting), an electronic newsletter summarizing each organization's safety activities in the region for the previous 12 months and their expected activities for the following year.

**Activity G: Mobilize International Organizations as Partners in Supporting Road Safety in the Asia Pacific Region**

51. As Appendix 3 shows, a number of international organizations and associations active in the region could play a larger role in road safety. Some are involved in commercial activities that are linked to road crashes (e.g. motorcycle vendors). In the past, few efforts were made to persuade such organizations to take responsibility for reducing road crashes. Given the prominent role ADB plays in the Asia Pacific region, it should initiate and lead efforts to mainstream road safety in the operation of these organizations. There are also various other organizations and associations that are already active in road safety but have potential to do more through collaboration with ADB.

52. ADB plans to identify and mobilize about 20 international organizations to work as ADB partners and address road safety in their own areas of activity. This will greatly benefit road safety across the region and will engage the private sector in helping to solve the problems facing DMCs. For example, mobilizing truck manufacturers and truck fleet owners and mandating and integrating both rear and side underride protection devices for new trucks, and launching retrofitting programs for trucks already on roads, could make a major contribution to reducing the severity of injury in truck related crashes.

53. ADB also plans to work with universities and research institutes based in the region to encourage road safety research and introduce road safety into the training of future professionals studying for civil engineering, economics, planning and related courses. There are also several international networks of road safety professionals with interest in road safety and injury prevention and they too can be mobilized to work in partnership with ADB (for example, international networks of traffic police organizations such as TISPOL and LEAD/ROADPOL could provide expertise on enforcement and help to professionalize traffic police forces by introducing best practices in police performance, data led enforcement and governance issues).

**The proposed actions for Activity G are the follows:**

- G1 Identify and organize preliminary discussions with most relevant international organizations and associations that are active in Asia and Pacific region and who could do more to improve road safety;
- G2 Conduct negotiations and sign MOUs/partnership agreements with such international organizations/associations at sub regional level (with the active support/participation of the countries involved in each sub region);
- G3 Mobilize international networks such as TISPOL, ROADPOL and other safety professionals to provide specialist expertise and to introduce best international practices to strengthen relevant organizations such as traffic police.

### III. NEXT STEPS AND TIMELINE OF IMPLEMENTATION

54. The action plan is devised as a working document that includes the most urgent activities. The plan covers the 5 year period of 2011-2015 and will be reviewed and updated annually based on the progress achieved. Switching to a practice of rolling 5 year plans may be considered at the third year of implementation. It will be important that at the outset of the implementation all concerned ADB staff at all levels are fully informed regarding the key activities required for the implementation the action plan. Key targets/indicators for the implementation of the action plan are shown below in Table 1.

**Table 1: Key Targets/Indicators for the Implementation of the Action Plan**

Year	Actions
2011	<ol style="list-style-type: none"> <li>1. Complete awareness campaign on the action plan for ADB staff</li> <li>2. Introduce the RSG (with 1 seconded staff initially)</li> <li>3. Start preparing road safety guidelines and procedures for ADB staff (iRAP and RSAs)</li> <li>4. Conduct pilot basic road safety and RSA training for ADB staff</li> <li>5. Start 1 road safety RETA</li> <li>6. Start 1 road safety pipeline (PATA/CDTA)</li> <li>7. Include standalone road safety pipelines in COBPs where feasible (2 countries)</li> <li>8. Enter into partnership with 2 international organizations affecting road safety in Asia Pacific</li> <li>9. Enter into partnership with 1 international road safety networks/agency</li> </ol>
2012	<ol style="list-style-type: none"> <li>1. Fully complete RSG staffing (1 all-round; 1 engineering and 1 non-engineering experts)</li> <li>2. Engage RSG extension (two long term road safety consultants and 3 short-term consultants) to support road safety work in the concerned divisions.</li> <li>3. Create initial pool of road safety consultants (5 nos) and retainer list of firms (5 firms)</li> <li>4. Fully complete road safety guidelines and procedures for ADB staff, start operationalization</li> <li>5. Launch systematic road safety training for ADB staff in all key areas of road safety work</li> <li>6. Start 4 road safety RETAs</li> <li>7. Start 2 road safety pipelines (PATAs/CDTAs)</li> <li>8. Include standalone road safety pipelines in COBPs for 5 more countries</li> <li>9. Start practice of preparation of road safety components in 100% PPTAs of road projects</li> <li>10. Strengthen/revive safety components in existing investment projects where possible (5 loans)</li> <li>11. Enter into MOUs/partnership with all key international organizations (10 in total) affecting road safety in Asia and Pacific</li> <li>12. Enter into MOUs/partnership with all key international road safety networks/agencies (5 in total)</li> <li>13. Establish MDBs Country Incentive Fund with ADB participation</li> <li>14. Enter in partnership/cofinancing for 1 standalone road safety pipeline</li> </ol>
2013	<ol style="list-style-type: none"> <li>1. Fully complete pool of road safety consultants (30 Nos) and retainer list of firms (10 firms)</li> <li>2. Fully operationalize road safety guidelines and procedures</li> <li>3. Start 3 road safety pipelines (PATAs/CDTAs)</li> <li>4. Include standalone road safety pipelines in COBPs for 10 more countries</li> <li>5. Enter in partnership/cofinancing for 2 standalone road safety pipelines</li> </ol>
2014	<ol style="list-style-type: none"> <li>1. Start 4 road safety pipelines (PATAs/CDTAs)</li> <li>2. Achieve inclusion of road safety components in 100% of new road investment projects</li> <li>3. Increase relative weight of road safety components by at least 30% as compared to 2011 level</li> <li>4. Start 1 standalone road safety investment project</li> <li>5. Enter in partnership/cofinancing for 3 standalone road safety pipelines</li> </ol>
2015	<ol style="list-style-type: none"> <li>1. Start 5 road safety pipelines (PATAs/CDTAs)</li> <li>2. Start 2 standalone road safety investment projects</li> </ol>

#### IV. MONITORING AND EVALUATION

55. There will be three levels of the monitoring and review of the implementation of the action plan: key targets, project specific, and impact levels.

56. **Key targets.** This will involve monitoring of the key targets as outlined in Table 1 above. This monitoring will be conducted by the TCOP advisory team on road safety and will be conducted semi-annually. TCOP advisory team will develop monitoring sheets and related monitoring mechanisms<sup>30</sup> and reporting procedures ensuring that both achievements and difficulties are brought to the attention of the ADB senior management.

57. **Project specific level** will involve ongoing monitoring of each operational activity (RETAs, PATAs, PPTAs, and investments). This will be done using existing monitoring and reporting mechanisms for TAs and projects, both during processing and implementation. This will be done by ADB project officers/mission leaders interacting with the DMC counterparts and consultants and reporting on the progress against processing milestones (at the processing stage) and against specific targets in the Design and Monitoring Framework (at the implementation stage).

58. RSG and consultants engaged by RSG to support regional departments in road safety work will be closely involved in this process, assisting ADB staff in both preparation and monitoring of implementation of road safety TAs and investments. Assistance with the preparation of the project-specific Design and Monitoring Frameworks and setting up baseline data collection process<sup>31</sup> will be an essential activity of RSG enabling proper monitoring and evaluation.

59. TCoP advisory team on road safety with the support of RSG will also introduce a mechanisms ensuring a proactive approach in identification issues and related solutions. This will involve collecting summary information on key issues and lessons learned in the implementation of road safety TAs and investments from the project officers in charge, and disseminating this information in brown bag seminars/brainstorming sessions for TCOP. This information will also feed back to the dedicated road safety training to ADB staff.

60. **Impact level** will use both the existing mechanism of project impact evaluation (project completion reports, evaluation studies by the Operations Evaluation Department), and additional dedicated studies by the RSG with the support of road safety consultants. The latter will also attempt to evaluate how specific actions and countermeasures work and what effect ADB road safety projects have at the jurisdiction/country level.

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<sup>30</sup> This may include establishing monitoring and reporting spreadsheets and data collection procedure and/or a dedicated RSAP monitoring module in the ADB e-OP system, requiring and facilitating Regional Departments to report on the achievement of each of the macro-targets

<sup>31</sup> In addition to 'hard' data indicators, the effort will be made to come up with the proxy indicators adequately measuring road safety. Such factors as underreporting, data skews, and benchmarking (baseline year vs. projected values) will also need to be incorporated.

## A SHARED APPROACH TO MANAGING ROAD SAFETY

### Joint Statement by the African Development Bank, Asian Development Bank, European Bank for Reconstruction and Development, European Investment Bank, Inter-American Development Bank, Islamic Development Bank and the World Bank<sup>32</sup>

#### Global call for Action

1. We acknowledge the scale of the public health crisis arising from deaths and injuries on the roads of developing and emerging countries, the recommendations of the *World Report on Road Traffic Injury Prevention*,<sup>33</sup> the global call for action from World Health Assembly Resolution WHA57.10 (Road Safety and Health) and UN General Assembly Resolutions 56/289, 60/5 and 62/244 (Improving Global Road Safety).

#### Systematic multispectral response

2. We recognize that a systematic, multi sectorial response is required to address this global crisis including interventions that improve the safety of road infrastructure, vehicles, road user behavior and post-crash services, and we support the principles of the Safe System approach<sup>34</sup> aiming at (i) developing road transport systems prevention, reduction and accommodation of human error; (ii) taking into account social costs and impacts of road trauma in the development and selection of investment program; (iii) establishing shared responsibility for road safety among all stakeholders; (iv) creating effective and comprehensive management and communications structures for road safety; and (v) aligning safety management decision making with broader societal decision making to meet economic, human and environmental goals, and to create an environment that generates demand for safe road transport products and services. We recognize the relevance of this approach to all countries irrespective of their economic or road safety performance. More specifically, we note that a significant and sustained contribution to fatality reduction will come from road infrastructure safety improvements.

#### Shared approach

3. We also recognize that our respective organizations expect to remain significantly engaged in the provision of road infrastructure in developing and emerging countries over the coming decade, and beyond, and we commit to share our organizational practices and knowledge to support (i) the strengthening of road safety management capacity of our clients; (ii) the implementation of safety approaches in the design, construction, operation and maintenance of road infrastructure projects, particularly to improve safe access and protection for vulnerable road users who represent a significant proportion of the people served by the projects we finance; (iii) the improvement of safety performance measures; and (iv) the mobilization of resources for road safety.

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<sup>32</sup> The findings, interpretations, conclusions and agreements reached in this statement do not necessarily reflect the views of members of the governing bodies of the organizations party to this agreement or the governments they represent.

<sup>33</sup> Eds. Peden M, Scurfield R, Sleet D, Mohan D, Hyder A, Jarawan E, Mathers C (2004). *World Report on Road Traffic Injury Prevention*, World Health Organization, Geneva.

<sup>34</sup> OECD, International Transport Forum (2008). *Towards Zero. Ambitious Road Safety Targets and the Safe System Approach*, Joint Transport Research Center, OECD/ITF, Paris.

## Appendix 1

4. To achieve this approach we will share the complementary skills and practices we each develop in our respective operations in the areas of:

*(i) Strengthening road safety management capacity*

- Help establish country-specific mechanisms for improving road safety management functions and safety practices aiming at achieving the sustainable, effective, and cost-efficient reduction of road casualties.
- Create awareness for safety in order to achieve informed decisions by countries on the planning, design, construction, operation and maintenance of road infrastructure assets and networks.
- Improve communications, cooperation, and collaboration among global, regional and country institutions in the area of road safety and facilitate the dissemination of up-to-date safety-related information.
- Provide our staff development and training to facilitate the successful implementation of shared procedures, guidelines and related tools.
- Contribute to the training of transportation safety professionals in developing and emerging countries by financing efforts such as the development of road safety education programs, manuals and training materials promoting good practices related to road safety, to facilitate the implementation of improved road safety practices and procedures.

*(ii) Implementation of safety approaches in the planning, design, construction, operation and maintenance of road infrastructure projects*

- Develop shared procedures, guidelines and related tools to implement a safety approach to the planning, design, construction, operation and maintenance of road infrastructure projects.
- Ensure that safety is integrated in all phases of planning, design, construction, appraisal, operation and maintenance of road infrastructure.
- Promote the adoption of good practice, proactive approaches to improve the safety of road infrastructure including the use of road safety audits, road safety inspections, and road safety impact assessments.
- Develop specific approaches to address the safety requirements of vulnerable road users (pedestrians, cyclists and motorcyclists), including a special focus on urban areas where a high proportion of trauma occurs.

*(iii) Improvement of safety performance measures*

- Promote the establishment of sustainable management systems for road crash data collection, entry, verification, storage, retrieving and analysis, including GIS-based applications.
- Promote the use of good practice quantitative and qualitative indicators to measure safety results.
- Promote the development, piloting, and objective validation of innovative safety indicators, such as the safety rating of roads.

*(iv) Mobilization of resources for road safety*

- Transfer road safety knowledge and experience across and within our organizations, and to our global, regional and country partners.
- Support the mobilization of additional domestic and external resources for road safety.
- Support the mission and goals of the Global Road Safety Facility in its promotion of innovative solutions to road safety issues.
- Establish as needed an expert technical group comprising staff from our respective organizations and international specialists to assist in the development of shared approaches to road safety.
- Identify, and pursue opportunities for scaling up road safety in countries strategies.

**Timetable for action**

5. We will commence the development and implementation of this shared approach to managing road safety immediately and we will meet in 2010 to assess progress of the implementation of this statement.

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## **ROAD CRASHES ARE AN ECONOMIC, POVERTY AND HEALTH PROBLEM**

### ***1. Economic problem***

2.1 Research undertaken in 10 individual ASEAN countries during a recent ADB regional project indicated that annual losses to country economies due to road crashes were as high as 3.2% of annual GDP. Averaged over the 10 countries, it was found that the ASEAN region as a whole was losing 2.2% of its GDP due to road crashes. If a similar order of losses is assumed across Asia Pacific, the region is losing over US\$96 billion every year (based on 2007 GDP data). Such huge recurring annual losses (far in excess of the total aid and development assistance received from ADB, World Bank and all bilateral donors combined) are inhibiting the economic development of the region.

### ***2. Poverty Problem***

2.2 Household surveys and research into over 73,000 households in Bangladesh and nearly 20,000 households in Bangalore, India indicates that poor people are particularly at risk from road crashes. Many of those killed or injured are vulnerable road users (pedestrians and riders of 2 or 3 wheeled vehicles). These tend to be poorer groups than car drivers, with fewer resources to draw upon in times of emergency or income loss. In Bangladesh, research showed that many road crash victims were the main income providers for their family, often having both elderly and young family dependents. The income from those killed amounted to a large part of household income (62% in urban and 42% in rural poor families). Road crashes also affect poor households disproportionately in Bangalore, India where it was found that many of those killed in road crashes were the main contributors to household income (59% in urban and 75% in rural areas).

2.3 While only one member of a household may be involved in a road crash, the impact will affect the whole household. Road crashes impose a double burden on poor households. They lead to unexpected medical and even funeral costs, and cause loss of income of the victim and/or carer. Statistics show that average amount of funeral bills paid by urban Bangladeshi households suffered a road fatality is equivalent to around 3 months of household income,. The average amount of medical costs paid by rural Bangladeshi households with a member suffered a serious road injury is equivalent to 4 months household income. Thus such families often get into further serious debt as a direct result of involvement in a road crash. Two thirds of poor Bangladeshi households, both bereaved and with serious injury, borrowed money and this was also the case in Bangalore where 66% of seriously injured and bereaved households had to arrange a loan.

2.4 Over 70% of poor families suffered a decrease in total household income after a member was killed or seriously injured and 70% of poor bereaved households reported a decrease in food consumption because of less income after road death. Road crashes can tip many households into poverty. In Bangalore, India, 71% (urban) and 53% (rural) of households officially classified as poor were above the official poverty line before they suffered a loss from a fatal road crash. In Bangladesh, the figures were 33% (urban) and 49% (rural).

### ***3. Health Problem***

2.5 Low or middle-income countries are responsible for around 90% of global road fatalities, 90% of disability adjusted life years lost due to road crashes, and 96% of the children killed in road crashes. Over 50% of global road fatalities are young adults in the 15-44 years age range. For young people aged 5-29 years, road crashes are already the leading cause of death worldwide. In Asia Pacific region the problem is even worse and road crashes are already the leading cause of death for the 5-44 years age group. This is the most economically productive

## Appendix 2

segment of the population and their lost productivity can have very big impact upon the economic and social development of a country.

2.6 Road crashes already kill more people than malaria. By 2030 WHO estimates that road crashes will kill twice as many people as HIV/AIDS, and nearly 4 times as many as tuberculosis.

2.7 In 2004, road crashes were already a serious health problem worldwide. They were the 9<sup>th</sup> most important burden upon the health services and medical resources globally. By 2030, due to continued increases in road crashes in developing countries, this will rise to 5<sup>th</sup>. Growth in road deaths and injuries is going to consume more and more of the limited resources available in developing country health system unless urgent action is taken. WHO estimates that road accident victims will be consuming 25% of health ministry budgets in developing countries by 2030.

2.8 The Asia Pacific region already contributes nearly half of global road deaths and injuries. The underdeveloped road networks, mixed traffic, limited availability of traffic engineering expertise, governance issues and the rapid increases in motorcycles are exacerbating the situation and road crash deaths and injuries are increasing rapidly in most countries in the region.

## EXAMPLE OF INTERNATIONAL ORGANIZATIONS THAT CAN BE MOBILIZED AS PARTNERS FOR ROAD SAFETY

3.1 Many international organizations and associations are operating and earning significant revenues from transport in the Asia Pacific region, and in many cases their activities are contributing to the growing road safety problem. Few of these organizations take direct responsibility for trying to tackle the problem. In support of its DMCs, ADB can encourage and mobilize such organizations to play a role in assisting in the improvement of road safety across the region. There are many organizations that need to be contacted and mobilized but the following illustrates a few that could be mobilized as potential partners by ADB and indicates the kinds of actions they could be encouraged to take:

**1. Federation of Asian Motorcycle industries (FAMI):** This organization represents all the motorcycle manufacturers in Asia and sells tens of millions of motorcycles each year in the region adding to the risks of road users throughout the region. At present, FAMI plays little role in improving road safety.

**Proposed Action:** FAMI members could be encouraged, for example, to give 2 good quality tropical motorcycle helmets free with every motorcycle sold, together with a free voucher for 4 hours of safe riding instruction which can be cashed in at any driving school (where they can be shown safety films emphasizing consequences of not wearing helmets and taught basics of safe riding). Motorcycle helmets should be seen as an integral part of a motorcycle in the same way that seat belts now are for a car. Manufacturers should be made to take more responsibility for the safe use of their products. Additional measures can include mandating and integrating daytime running light systems on motorcycles/three wheelers which significantly reduce risk of visibility related crashes. FAMI has indicated willingness to discuss such an industry wide initiative.

**2. International Road Federation (IRF):** Members of the IRF include road design consultants, contractors and equipment suppliers who design and build roads in Asia Pacific region. They carry out safety audits if required by their clients but the same consultants frequently also deliver roads that have not been safety audited and which may have unsafe features.

**Proposed Action.** IRF members should be required to take more responsibility for the safety of the roads they deliver. As professional engineers, they should not permit any road to be delivered that has not been safety audited, that is not “forgiving” or that does not provide protection for vulnerable road users. This should in future be a requirement of IRF membership. Discussions are already underway at global level with IRF headquarters in Geneva.

**3. World Roads Association (PIARC):** It has members in 142 countries (often the government roads authority) and most Asian countries are members. The members operate and maintain the road networks in their countries and commission IRF members to design and build the roads. Despite ADB’s and others’ requirement that safety audits should be undertaken of all new or rehabilitated roads, this still does not happen as rigorously and systematically as required.

**Proposed Action.** PIARC members should require that all roads commissioned by them will be safety audited, that they will be “forgiving” and that they will provide protection for vulnerable road users. This can be reinforced in DMCs by ADB requiring safety audits on all roads funded by them and by checking safety impacts of all road infrastructure projects.

**4. International Road Transport Union (IRU):** This international organization has 181 national member associations covering the road transport industry in 75 countries including most Asian countries. IRU represents bus, taxi and truck operators across the Asia Pacific region.

**Proposed Action.** IRU's member network can be used to reach out to millions of transport operators across the region (e.g. in Indonesia alone there are over 100,000 truck owners who can be reached via this organization). In subregional projects these networks can be mobilized to help deliver road safety.

**5. FIA and FIA Foundation.** FIA is the Fédération Internationale de l'Automobile, the non-profit federation of motoring organisations and the governing body of world motor sport. In 2001, it established the FIA Foundation for the Automobile and Society which undertakes research into public policy issues relating to the automobile's interaction with society. The FIA Foundation also collaborates regularly with international institutions responsible for political and technical issues relating to road safety, sustainable mobility and the environment. It provides for eligible road safety programs, such as the International Road Assessment Programme (iRAP). Official aims are to further "road safety" and "sustainable mobility". In 2009, ADB signed an MOU with FIA foundation to work together on mainstreaming road safety in ADB operations.

**Proposed Action.** Work with FIA and FIA Foundation towards developing and mandating both rear and side underride protection devices in DMCs for new trucks; and launching retrofitting programs for trucks already on roads.

3.2 There are also a number of regionally based organizations and international networks of professionals in different sectors that could also be mobilized to help improve road safety and sustainability in the region. These include:

1. Universities and research institutes in the region and international networks of road safety researchers. They could undertake road safety research on issues of interest to DMCs in the region e.g. motorcycle safety. The international network of road safety researchers could provide mentoring and training in research techniques and analyses and perhaps participate in joint projects on research topics and issues of interest to DMCs.
2. Universities in the region could be encouraged (by developing suitable modules) to include road safety topics in relevant university courses (e.g. civil engineering, transport, economics, education teacher training, etc.) to make potential young professionals aware of such issues, the scale and nature of the problem and what remedial measures can be implemented. The Association of Universities of Asia and Pacific may become a key counterpart to roll out and harmonize the programs. Ultimately, full training of traffic and road safety professionals should be included as a stream in the civil engineering programs.
3. International police organizations (TISPOL, LEAD/ROADPOL and others) can provide advice and training in international best practices to develop traffic police forces. They can introduce more effective enforcement activities and international best practices into police organizations in DMCs. Their support will be particularly useful in introducing best practices in traffic police management, data led enforcement and governance issues. This will result in more professional traffic police forces in the DMCs assisted.

4. Collaborative Working Group for Essential Trauma Care includes representatives of the Injuries and Violence Prevention Department of WHO; the International Association for Trauma and Surgical Intensive Care, and representatives of trauma care clinicians from about 12 countries, including at least one from each of the Americas, Europe, Africa and Asia. The group could promote and facilitate the implementation of essential trauma care services that can reasonably be assured to virtually every person injured in a road crash in the Asia Pacific region (currently most injured patients do not receive these services).

3.3 There will be many other international organizations and networks or road safety professionals who may be able to assist in improving road safety in DMCs. One of the early tasks for the RSG will be to identify such potential partners and to explore possibilities and conditions under which they may be willing to provide increased support for road safety.

## CONTRIBUTION OF ROAD SAFETY ACTION PLAN TO KEY ASPECTS OF ADB STRATEGY 2020

### I. Strategic Agenda

**1. Inclusive Economic Growth:** ADB invests in infrastructure to increase access to markets, education and public services. This particularly benefits the poor and women.

Improvement of road safety helps countries to reduce their annual economic losses from road crashes (typically around 2% of annual GDP) leaving more funds available for public services. It also reduces the numbers of families adversely affected by the loss of a wage earner, or the burden of additional financial and human costs associated with having an injured or disabled family member, which can exacerbate the severity of poverty and cause more families to fall into poverty.

**2. Environmentally Sustainable Growth:** ADB supports environmentally friendly technologies, environmental safeguards and development of institutional capacity for enforcement.

A high percentage of road crash victims in Asia Pacific region are from vulnerable groups, especially pedestrians, cyclists and motorcyclists. Provision of better, safer facilities for cyclists and pedestrians and safer public transport will encourage increased use of such modes and contribute towards environmentally sustainable growth. Improved use of self-enforcing safety solutions (speed reduction devices such as road humps, rumble strips, chicanes and traffic calming devices) will reduce speeds at locations of high pedestrian activity and this will also contribute towards a reduction in fuel consumption.

**3. Regional Integration:** ADB seeks to increase regional cooperation and integration to accelerate growth and harmonization to achieve closer policy coordination and collaboration.

ADB's road safety action plan recommends a subregional approach to regional cooperation, collaboration and knowledge sharing among DMCs to support road safety. This is directly in line with Strategy 2020 which seeks to increase regional cooperation, integration and harmonization and achieve increased policy coordination and collaboration. ADB's ASEAN Road Safety Project was particularly effective in stimulating such subregional cooperation, coordination and harmonization across 10 countries. This is the only developing subregion of the world where there is now a multicountry multisector road safety working group meeting regularly to collaborate, share knowledge and harmonize road safety activities across countries. Similar projects can be undertaken in other subregions.

### II. Drivers of Change

The road safety action plan will use the same drivers of change as indicated in Strategy 2020.

**1. Private Sector Development and Private Sector Operations:** ADB will promote public-private partnerships in all core operating areas and encourage governments to establish business friendly environments so that the private sector plays its full part in development.

Road safety problems cannot be solved by government alone. A partnership approach is needed involving government, the private sector and NGOs/community. This is fundamental to all road safety work. The proposed approach of partnering with key international organizations and associations such as motorcycle manufacturers, and operators of bus, taxi and truck companies, will facilitate partnership with the private sector.

**2. Good Governance and Capacity Development:** ADB will promote good governance (accountability, participation, predictability and transparency) into its operations to improve effectiveness of policy formulation and implementation and more efficient use of public resources

Capacity building is an integral part of most road safety projects and is an essential and major element of any comprehensive road safety action plan in a country or subregion in order to improve policy making and to ensure more effective expenditure of public funds. Implementation of the ADB road safety action plan and action plans in DMCs will support ADB strategic efforts to strengthen capacity and effective policy making in its developing countries and good governance and transparency in expenditure and enforcement. Strengthening the capacity of police management, training of traffic police and introduction of performance management measures as part of improving traffic police enforcement will reduce the scope for corruption and increase transparency and fairness in police enforcement activities.

**3. Gender Equity:** ADB will promote gender equity through its operations to deliver gender specific outcomes such as improved access for women and girls to education and health services, clean water, better sanitation and basic infrastructure.

In the last 5 years alone over 22 million families in the Asia Pacific region have had a death or permanent disability from a road crash and in the next 5 years a further 32 million families will have to cope with a death or permanent disability resulting from road crashes if we do not take action. When a wage earner dies or a family member is severely disabled, their household suffers hardship. Much of the hardship is borne by the women of the household as they often have to become full-time caregivers, perhaps having to give up work or school in order to do so. If the disabled person is a child, the mother or sister may have to spend the rest of her life looking after the person and limiting their own chances of leading a productive and fulfilling life. Improvement of road safety could therefore be particularly beneficial in improving the situation and life chances of women, especially in poorer households.

**4. Knowledge Solutions:** ADB will address its client countries' knowledge needs by determining and passing on best practices and supporting pilot projects from which lessons can be distilled and disseminated.

The ADB road safety action plan will assist DMCs in development of capacity to manage road safety problems, sharing of knowledge on best practices and implementing pilot projects to learn and disseminate lessons.

**5. Partnerships:** ADB will expand and diversify its partnerships with multilateral and bilateral institutions, development agencies and NGOs, as well as with the private sector and private institutions in order to meet the region's challenges.

By its very nature road safety is a multi-sector, multi-agency problem which requires extensive partnership between government agencies, the private sector, NGOs, and communities. The ADB road safety action plan also requires collaboration and coordination among those financing road safety support in the region so that a coordinated approach can be established. It is also necessary to work with various organizations that can influence road safety through their members, such as the Federation of Asian Motorcycle Industries (FAMI). There are numerous other organizations and networks of road safety professionals that can help improve road safety.

## CHARACTERISTICS OF THE PROPOSED ROAD SAFETY GROUP

5.1 **Role, Place and Tasks of a Road Safety Group (RSG).** Establishment of the RSG is a key step for strengthening ADB's road safety management capacity. The approach to the RSG takes into account past lessons when fields such as environment, gender, social safeguards, and climate change were expanded in ADB.

5.2 The RSG will be located in RSID and will be guided by the TCoP advisory team on road safety. It will coordinate and provide advisory support for road safety work across ADB as well as external initiatives related to road safety. The RSG will be in charge of:

- (i) assisting concerned divisions in road safety work at each stage in the project cycle including assisting ADB missions (country programming, consultation, review and fact-finding), contributing to project design (concept papers, TORs, DMFs, design of road safety components), assisting with consultant engagement process, review of road safety consultant work, and providing other inputs as needed to promote and mainstream road safety into ADB operations and activities;
- (ii) building internal road safety capacity/knowledge among ADB staff;
- (iii) developing and assisting with the implementation of procedures, guidelines and related tools ensuring incorporation of safety in the project design and in planning, design, construction, operation and maintenance of road projects;
- (iv) conducting peer reviews on road safety and ensuring that road safety is integrated and mainstreamed into all ADB operations;
- (v) developing, updating and monitoring the implementation of ADB road safety action plans and road safety performance in general; and
- (vi) providing inputs and liaison as necessary with external bodies and organizations to promote road safety generally and especially across the Asia Pacific region.

5.3 Currently, these tasks are partly attended to by the TCoP advisory team on road safety. However, since the advisory team members have other full time responsibilities, their work needs to be supplemented by the RSG in order for ADB road safety support to be scaled up.

5.4 **Composition of Road Safety Group (RSG).** RSG will have two parts consisting of (i) the RSG core group comprising three or four staff based in the center, and (ii) the RSG extension, comprising ADB staff consultants working full time in the concerned divisions. The RSG will be rolled out in phase manner, starting with the core group and expanding further to the extension (individual consultants). The RSG core group will comprise (i) one lead road safety specialist with all-round knowledge of road safety as a group leader, (ii) one road safety expert specializing in engineering aspects of road safety, and (iii) one road safety expert specializing in non-engineering aspects of road safety such as police enforcement/legislation or driver and vehicle licensing issues. It may be that the skills mix is altered periodically as ADB's needs change.

It is essential that these persons should be knowledgeable road safety experts with extensive experience. Since there is a limited pool of road safety experts within ADB, and because it may take some time before ADB can recruit permanent road safety specialist staff for the core group, this core group may initially need to be formed with staff seconded from ADB's more developed member countries who have particular expertise in road safety or temporarily by using specialist consultants. The RSG extension will comprise long-term road safety consultants selected by RSG and working full-time and part time as needed in the concerned departments under supervision and guidance of the RSG core group. Depending on their performance, such consultants can eventually be considered for possible recruitment into the ADB staff for positions of road safety specialists in the operational departments. The RSG will also establish a pool of pre-qualified road

## Appendix 5

safety consultants and consulting firms on a retainer or call-off contract basis, which can be quickly engaged to do road safety assignments. In the first instance, only the core RSG will be established to get things started; then the RSG extension will be operationalized. They will provide inputs and support to regional departments until safety experts can be recruited/assigned to work in each department.

**5.5 Qualifications of RSG.** The staff within the RSG must collectively possess the full mix of qualifications considered necessary for proper road safety management. Lacking some of the qualifications would lead to a risk of subjectively overemphasizing some areas of road safety work and neglecting others. The tentative set of required skills is listed below:

- Road safety engineering countermeasures
- Road safety training
- Road safety audit at different stages
- Road safety inspections
- Road network screening
- Safety impact assessment
- Blackspot management
- Quantitative assessment of safety of design alternatives
- Quantitative assessment of societal costs of road trauma
- Country/jurisdiction strategies and Action Plans
- Accident data systems and data analyses/ management
- Assessing/building road safety management capacity
- Highway rescue
- Traffic police Enforcement
- Road safety legislation
- Road user education
- Driver licensing systems
- Vehicle roadworthiness inspections
- Emergency medical services
- Awareness campaigns
- Road safety through ITS
- Positive guidance/human factors
- Passive/active vehicle safety
- Roadside safety hardware
- Road safety research
- Economic analyses of road safety interventions
- Gender-related road safety analyses and countermeasures