

Road Safety Guidelines

for the Asian and Pacific Region

3

ROAD SAFETY ACTION PLANS AND PROGRAMS



Asian Development Bank

ROAD SAFETY ACTION PLANS AND PROGRAMS

Experience in industrialized and developing countries demonstrates that road safety improvements can be achieved only by working on all sectors affecting road safety, and that this is best done within a comprehensive coordinated road safety plan.

Asian and Pacific countries are all at different stages of development with respect to road safety awareness and activity. To be effective, therefore, road safety interventions need to be undertaken in three distinct stages, as follows:

- stage 1: raising awareness;
- stage 2: prioritized road safety action plans; and
- stage 3: five-year road safety programs.

There are benefits to setting casualty reduction targets. However, developing countries should not just blindly adopt targets similar to those aimed for in the industrialized countries. The setting of realistic and achievable casualty reduction targets in developing countries is more complex because of their stages of development in terms of their level of motorization or vehicle ownership. Consequently, developing countries are advised to adopt targets related to “numbers of lives saved” from different interventions rather than targets connected with total death or casualty reduction, since such casualty reductions are unlikely to occur during periods of rapid motorization. It is also beneficial to establish behavioral and other noncasualty targets (such as the percentage wearing seat belts or kilometers of footpaths constructed).

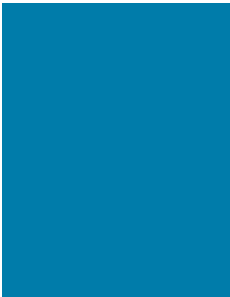
Appropriate targets and performance indicators should be established and all plans and programs monitored to ensure effectiveness.

PRIORITY ACTIONS NEEDED

1. Initiate an independent review of road safety and organize a national seminar to present and discuss findings and to raise awareness of safety issues.
2. Establish a national road safety council (NRSC) with adequate technical and financial resources to coordinate road safety activity nationwide and to develop a road safety action plan.
3. Include a road safety component in relevant new Asian Development Bank (ADB) or World Bank projects and explore whether any unutilized loan funds on existing projects can be redirected to road safety.

Road safety activity can be developed in a country by implementing road safety action plans and programs with interventions in all key sectors. Appropriate targets and performance indicators should be established and all plans and programs monitored to ensure effectiveness.

3.1 THE NEED FOR COORDINATED ACTION



Effectiveness of road safety activities in any one sector is often dependent upon complementary supportive activity being carried out in related sectors. Absence of such complementary activity can diminish effectiveness. Conversely, coordination across several related sectors can result in substantial synergy occurring, where the effect is multiplied. Interventions will, therefore, be required in each road safety sector to ensure that all sectors are contributing effectively towards the overall improvement of safety. Chapter 4, which contains a series of individual sector guidelines, offers guidance on the sorts of actions and interventions that should be considered within each sector.

Given the wide range of sectors that can influence road safety, it is essential that activities are coordinated and harmonized to achieve the maximum effect.

Effective coordination and decision making are integral parts of managing and implementing national road safety action plans and interventions. Appropriate mechanisms need to be set in place to achieve this. The various options available and the functions needed at the different administrative levels are discussed in more depth in Sector Guidelines 4.1.

Before action plans can be devised and implemented effectively, appropriate conditions must exist or be induced within a country. Countries of the Asian and Pacific region are at different stages of development with respect to safety activities and interventions, and have different strengths and weaknesses. Irrespective of these differences, most countries go through a number of stages before effective activity is undertaken in all sectors by relevant organizations. The following sections discuss the different stages and activities involved in most developing countries' efforts to tackle road safety problems. These stages are as follows:

- 1) raising awareness;
- 2) priority action plans; and
- 3) five-year road safety programs

Each of these is briefly discussed below.

3.2 Raising Awareness

a) *Typical situation at stage 1*

At the earliest stages of safety development, little or no safety awareness may exist and efforts will first need to be made to enhance the awareness of key decision makers as to the scale and nature of the problem and the activity that is necessary to alleviate it. Typically in such a country, accident data may not be regularly collected but, even if it is collected, it is likely that the data system will need extensive im-

provement. Not much will be known about trends or road users at greatest risk and even the main organizations with road safety responsibilities may not be clearly identifiable. General interest by the government will usually be low and it will be only a few individuals (often medical personnel) who are interested in trying to bring the problem to the public attention.

Typically, there will be no special police accident data unit to analyze or disseminate accident data and even if one exists, the data will be little used other than to provide overall administrative statistics for use within the po-

lice force. Accident data will often be incomplete or grossly inaccurate and there will be few, if any, professionals actively working to improve road safety through remedial measures.

b) Action required at stage 1

The primary focus of activity in such circumstances is to raise awareness among the decision makers in the country concerned and to demonstrate to them that road safety is a growing and urgent problem. This will require definition of the scale and characteristics of the problem, the bringing together of key parties that may be able to contribute towards solving the problem, and convincing those responsible for resource allocation that sufficient funds need to be made available to tackle road safety issues. The two main tasks that need to be undertaken at this stage are as follows:

- 1) carry out an independent review of road safety activities and, in particular, quantify the scale, nature, and characteristics of the problem to identify deficiencies and weaknesses (in terms of road safety) in the sectors and organizations related to road safety; and
- 2) organize a national road safety seminar involving all senior personnel from key government and nongovernment agencies with responsibilities or interest in road safety. Each of the main six or seven agencies should present a short (ten-

minute) paper on road safety problems, what needs to be done **in their particular area of responsibility** in order to tackle the problem, and what is preventing them from taking the necessary action. This one-day national seminar should result in agreement among the key agencies on the actions needed to tackle the problem. An interim inter-agency working group should also be established by drawing from the senior staff in six or seven of the key agencies represented at the seminar. This should function as the safety coordinating mechanism until a more formal national road safety council can be established.

The time needed for completion of these activities can be as little as two or three months. The technical assistance of an independent specialist road safety advisor may be needed to carry out the independent assessment of road safety activities and the road safety situation. The national road safety seminar should be organized to take place shortly after the completion of the review of road safety so that the results can be presented at the seminar to all participants.

The 10 to 15 agencies with road safety responsibilities or interests should be invited to send a senior representative to the one-day seminar. Participants at the seminar should be drawn both from the public sector (ministries and central and local government organizations) and the private sector (large commercial companies, insurance industry, transport operator organizations, and motor traders association, etc.). Representative organizations such as Chamber of Commerce, Lions Club, Rotary Club, and media representatives should also be invited to participate in the seminar.

Plate 1:
National road safety seminar, Samoa.



c) Financing stage 1 activities

There are a number of sources of funding to cover the costs involved and these costs are of two different types.

- 1) **Technical Assistance Costs.** These can often be financed by development banks such as the ADB or World Bank, which can often finance short-term technical assistance from their own funds or from trust funds. The purpose of such technical assistance is to review road safety

activities and to identify areas in need of improvement. Technical assistance is also often available from bilateral agencies such as the United Kingdom's (UK's) Overseas Development Administration (ODA), the Japan International Cooperation Agency (JICA), and other bilateral aid agencies that are sometimes willing to provide an expert for a short period to review road safety activities. All of these types of assistance tend to be on a **grant** basis.

It is, however, also possible for governments to use funds from existing development bank project loans in order to carry out such reviews of safety. Both the major development banks (ADB and World Bank) actively encourage reviews of safety so that better understanding of the problems and needs can be achieved. Countries should seek such assistance during discussions with ADB and World Bank project officers visiting the country, or by following up relevant specialists at the institutions (see Appendix B).

- 2) **Implementation Costs.** The only real implementation costs involved in this preliminary safety awareness raising activity are in organizing and carrying out the one-day national road safety seminar. Costs involved tend to be minor and can often be financed by sponsorship from the larger motor manufacturing companies, the fuel companies such as Shell or Mobil, or other commercial concerns such as banks and insurance companies who see involvement in sponsorship of road safety as part of their social obligations and good public relations.

The main purpose of these activities is to raise overall public awareness of road safety as an issue through press and media coverage of the national seminar, raising awareness, and awakening interest among major players who can influence road safety. It should also raise commitment among government agencies, which can take action to improve the situation. By consciously encouraging press coverage and providing articles, information, and statistics to coincide with the national seminar it is possible to build up a great deal of public awareness and media interest before the seminar is conducted.

It is particularly important to make some

estimation of the annual losses to the economy resulting from road accidents. In the absence of more detailed information on costings, it is possible to assume and publicize that road accidents cost the country **at least 1 percent** of the annual gross domestic product. This figure stated in US dollars or local currency provides at least a **minimum** figure for general publication, discussion, and focus, and provides a good hook to attract press and media coverage.

3.3 Prioritized Road Safety Action Plans

a) *Typical situation at stage 2*

Typical conditions that exist when a country is ready for the next stage of development in road safety are that the government will probably have received some technical assistance to review road safety activities and will have organized a national road safety seminar. The interim road safety working group may already be coordinating activities from time to time and obtaining periodic sponsorship for road safety initiatives, publicity campaigns, and materials. Individual ministries with road safety responsibilities may be starting to address the problem and beginning to take action that will improve road safety.

In particular, the ministries that deal with external funding agencies should by now have taken the opportunity to request assistance from bilateral aid agencies and multilateral development banks.

This would be to finance some or all of the proposed road safety improvements in order to rectify the deficiencies and weaknesses identified by the road safety review undertaken during stage one.

b) *Action required at stage 2*

The main purpose of this stage is to:

- 1) develop an overall strategy for the improvement of road safety in the country;
- 2) identify the most urgent improvements for inclusion within a priority action plan;
- 3) commence implementation of a priority action plan so that the basic systems and procedures can be established to enable more effective activity in road safety; and

- 4) strengthen the key organizations and individuals who need to be involved in improving road safety in the longer term.

The primary emphasis during this stage should be towards strengthening the key organizations, systems, and procedures so that once the priority action plan has been implemented, local organizations will be able to tackle the road safety problems of the country more effectively.

Typical activities that will need to be undertaken during this phase include the development of a strategy and implementation of a prioritized action plan.

This usually includes improvement of the accident data system, the establishment of a national road safety council or some other coordinating mechanism, and implementation of demonstration projects in other important sectors. This is done to provide training to individuals involved in the key agencies and to establish procedures and practices conducive to the improvement of road safety in the country.

Apart from the opportunities to participate in training through demonstration projects, a small multidisciplinary group of four or five senior individuals drawn from government agencies with the greatest responsibilities for road safety should make a two- to three-week overseas study tour, visiting countries that have demonstrated success in tackling road safety problems.

The prioritized action plan should ensure that basic systems are operating to at least a minimum level in all the most important areas by the end of the action plan period. Implementation of the plans can be undertaken in anything from 12 months to three years depending on the size and scope of the action plan, the size of the country, and the nature of the problems to be addressed. Generally, the intention is to develop a downstream five-year program while implementing the most urgent improvements needed to strengthen the key institutions and agencies.

Wherever possible, a timescale of around three years should be allowed for the action plan in order to develop and implement all the main improvements needed. The actual resources required to carry out the action plan will again depend upon the plan's nature, the scope of work, and the size of country. External specialist road safety advisory input of anything from

25 to about 50 person-months is typically required in implementing action plans.

In addition to the technical input, financial provision also has to be made for the actual physical cost of the individual interventions implemented as part of the action plan. An amount of US\$3 million to US\$5 million should be available for demonstration and pilot projects. Some of this will be financed by the government itself and other parts may be eligible for finance from road safety components within aid-funded loans. In addition to the resources, which may be available from external funding, a government will have to cover the cost of its own staff and specialists who will work as counterparts with the specialist external consultants and will participate in the implementation.

c) *Financing stage two activities*

Two different types of activity need to be financed under this phase. The first is financing of the **technical assistance** that might be required in order to provide the specialist road safety advice and assistance at key stages. The second type is related to **implementation cost** of the priority action plan, including funding of the training costs for local specialists. These costs are most commonly financed through a road safety component within an aid-funded project². Such components typically include funds for technical assistance, for equipment, infrastructure improvements (such as improvement of accident black spots), and training (both domestically and overseas) of key personnel.

It is highly desirable that some funds be included within the action plan to permit implementation of the "demonstration" projects and other countermeasures during the period of the consultancy project. This helps in training the local personnel and in building up the capability locally to tackle the problems rather than execution of a study with implementation to be carried out in a subsequent phase (after the consultants have departed).

Governments interested in implementing prioritized action plans and developing road safety should be aware that international development banks are keen to provide loan funding for the improvement of road safety, as they have recognized the importance and urgency of the problem. In addition, bilateral agencies providing assistance to a country can also of-

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ten be keen to assist countries in tackling road safety issues. Thus the international funding community is both aware and willing to provide loans, or other funding, for road safety interventions. However, a request must be received from the borrowing country or recipient country for road safety assistance before the ADB or World Bank can consider providing funding within existing or proposed projects.

The allocation of funds for prioritized action plans can take some time due to the bureaucratic processes involved. Therefore, requests should be made as quickly as possible so that ongoing or future aid-funded projects can provide funding for safety measures. In some cases, where funds have been underspent on previous or existing projects, aid agencies are often willing to allow some of the funds to be reallocated for use on road safety. Where such funds are available, governments should seek aid agency approval for the reallocation of these funds for safety initiatives.

By the end of the priority action plan, local professionals should have the capability to tackle the road safety problems facing the country. Government ministries should be investing

in road safety as part of their normal cycle of budgets in each sector, and they should have a greater appreciation of the losses being sustained by the country as a result of road accidents.

3.4 Five-year Road Safety Programs

a) Typical situation at stage 3

By this stage, the government should have received technical assistance and implemented a priority action plan and an improved accident data system should be in place with suitably trained local staff operating it. Analyses of black spots, locations, and characteristics of road accident groups most at risk should be being conducted regularly. An NRSC with several subcommittees should be providing policy guidance and some financial support to safety committees in municipalities and provinces. Road engineers and highway authorities should be skilled in basic accident black spot improvement work and in undertaking black spot im-

Figure 1: Extract from five-year Road Safety Action Plan, Fiji.

FRSAP (residual projects / initiatives, 3 Year action plan, 5 Year programme,	1996	1997	1998	1999	2000	Expenditure profile (US dollars thousand)						Potential Sources of Funding						
						1996	1997	1998	1999	2000	TOTAL	Govt.	Unk. Aid	IMR/ ADB	Gov. Public	The Sect.	Other	
A ACCIDENT DATA SYSTEM						A.												
A1. Training visits to all Divisions to train field personnel						A1.	3	3	3	-	9	✓	-	-	-	-	-	
A2. Establishment of Divisional Police Accident Data Units						A2.	5	5	5	-	15	✓	-	-	-	-	-	
A3. All data checked / entered at Divisional level						A3.	1	1	1	-	3	✓	-	-	-	-	-	
A4. Specialist external advisory inputs (2mm)						A4.	25	25	-	-	50	✓	-	✓	-	-	-	
						Subtotal	34	34	9	-	77							
B. NATIONAL ROAD SAFETY COUNCIL (NRSC)						B.												
B1. Publicity campaign activity						B1.	150	150	200	250	300	1050	✓	-	-	✓	✓	
B2. School children education initiatives						B2.	50	80	100	80	60	370	✓	-	-	✓	✓	
B3. Secretariat training						B3.	5	5	5	5	25	✓	-	✓	-	✓	✓	
B4. Specialist external adviser services (9mm)						B4.	60	60	60	-	180	✓	-	✓	-	-	-	
						Subtotal	265	295	365	335	365	1625						
C. INFRASTRUCTURE SAFETY IMPROVEMENTS						C.												
C1. Completion of FRSAP projects						C1.	-	-	-	-	-	-	✓	-	✓	-	-	
C2. Accident blackspot improvements (10/year)						C2.	-	-	250	250	250	750	✓	-	✓	-	-	
C3. Route action plan (3/year)						C3.	-	-	150	150	150	450	✓	-	✓	-	-	
C4. Mass action plan (10 application / year)						C4.	-	-	100	100	100	300	✓	-	✓	-	-	
C5. Village treatments (5/year)						C5.	-	-	125	125	125	375	✓	-	✓	-	-	
C6. Traffic management schemes (2 years)						C6.	60	60	60	60	60	300	✓	-	✓	-	-	
C7. Road marking / signing schemes						C7.	50	50	50	50	50	250	✓	-	✓	-	-	
C8. Specialist external adviser services (18mm)						C8.	60	180	-	-	240	✓	-	✓	-	-	-	
						Subtotal	170	290	735	735	735	2665						
D LEGISLATION						D.												
D1. Traffic Act to be finalised / enacted						D1.	25	25	-	-	50	✓	-	-	-	-	-	
D2. Publicity campaign to coincide with introduction of Act						D2.	-	30	-	-	30	✓	-	-	-	-	-	
D3. Overloading enforcement equipment acquired						D3.	-	300	220	-	520	✓	✓	✓	-	-	-	
D4. Specialist external adviser services (2mm)						D4.	-	-	-	-	-	-	-	-	-	-	-	
						Subtotal	25	355	220	-	600							
E TRAFFIC POLICE / ENFORCEMENT						E.												
E1. Enforcement vehicles 15 patrol cars - 36 motorcycles						E1.	150	150	150	150	100	700	✓	✓	✓	-	-	
E2. Enforcement equipment (radars, altimeters, signs, lights)						E2.	50	50	50	50	50	250	✓	✓	✓	-	-	
E3. Training course in use of equipment.						E3.	5	5	5	5	25	✓	-	✓	-	-	-	
E4. Specialist external adviser services (2mm)						E4.	-	25	25	-	50	✓	-	✓	-	-	-	
						Subtotal	205	230	230	205	153	703						

Note: Excludes funds already assigned via FRSAP Demonstration Projects

RSP1100/FIITABLCDR

Figure 1: Extract from 5-year Road Safety Action Plan, Fiji

provement programs on national and provincial roads. Efforts may already be underway through the NRSC to, for example, improve driving tests and vehicle inspection, and to develop children's traffic education programs.

There may also be a core of interested professionals specializing in various aspects of safety and keen to tackle the problem, but lacking resources to do so. The country, having already implemented a priority action plan, will have a number of government and non-government organizations involved and active in improving safety, creating a conducive atmosphere in which to formulate and implement a series of five-year road safety programs.

b) Action required at stage 3

The main purpose of this stage would be to consolidate the activities initiated during the priority action plan and to develop new activities and interventions that will enable the annual toll of road accident related deaths and injuries to be reduced. The first five-year plan should be seen largely as an extension and consolidation of the activities initiated in the previous priority action plan but subsequent five-year programs will be building on each previous five-year program. Actual implementation is normally undertaken by way of annual national road safety plans and these are prepared each year to guide and focus the activities of the various agencies towards achievable targets within the following year, but operating within the context and framework of the overall five-year program.

c) Financing stage 3 activities

By this stage, it becomes necessary for significant investment to be made in road safety, and most of this will have to be made by the government of the country concerned and not through external aid funding. Normally, some items selected from the program (for example, infrastructure improvements for a one-off safety program of marking and sign improvements on the national network) can be incorporated into aid-funded projects, but in the majority of cases, actual funding will have to be built into government annual budgeting and five-year national programs.

Government by now should be aware of the annual losses to the economy and willing to see expenditure on safety as an **investment** that

will, in the longer term, reduce such economic and social losses. Some countries even devote a fixed proportion of annual gross national product (GNP) towards the reduction of road accidents. For example, until recently, Japan used to devote about 0.6 percent of its annual GNP towards the improvement of road safety, in the knowledge that road accidents were costing the economy around 1.3 percent of annual GNP (i.e., Japan was investing about half of its estimated annual losses in efforts to try to improve road safety).

The kind of efforts that are required at this stage are a continuation of the activities of earlier periods, but in each case increasing the quality or quantity of activity aimed at improving road safety. The types of interventions likely to be needed are outlined in Chapter 4 of these guidelines. This covers all sectors from coordination and administration through to road safety research.

Within the five-year period, one-year safety plans are usually produced in the form of a document that is published and widely circulated so that all agencies have a clear focus on what needs to be done and targets to be achieved during the upcoming year. The resources required to establish the necessary procedures, systems, and practices so that the road safety problem can be reduced can vary from US\$15 million to US\$20 million in a small country to anything from US\$50 million up to several hundred million US dollars in a large country.

Most of the investment in a five-year action program needs to be undertaken by the country itself in recognition that **expenditure on road safety is an investment, not a cost.**

Unfortunately, road safety is a continuous and continuing problem. Completion of the first five-year program does not mean the end of the problem or that the problem has been solved. It will be necessary to develop a second and probably even a third five-year program to continue reducing the numbers and severity of road accidents. This may cost millions of US dollars but conversely will "save" (via reduced losses of productivity and less use of medical facilities) many more millions of dollars.

3.5 Road Safety Goals and Targets

Road safety strategies and plans should set realistic targets. In most industrialized count-

ries these have been expressed in terms of a reduction in the numbers of accidents and casualties expected. These targets must be capable of being understood and accepted by those responsible for road safety. The effectiveness of the plan must be regularly monitored and reported upon. A national road safety plan should, therefore, consist of a program of measures based on a careful analysis of the problem. This requires assembly of factual data on the road safety situation, identification of the problem areas, investigation of the true causes of accidents, and the development of appropriate countermeasures. Ranking of such measures should be based on the estimation of their cost effectiveness in saving lives or serious injuries.

Implementation of safety plans requires a clear identification of responsibilities between the different departments of the central government. One way of achieving this that has proved effective in a number of countries is to publish challenging but achievable casualty reduction targets, first at the national level and later disaggregated to the regions. It is important, however, to ensure that appropriate targets are set in developing countries, as is explained in the following four paragraphs. In addition to action at central level, decentralized action is essential. This must involve government organizations and activities at local level. Entities involved will not only be those with statutory responsibilities, such as the police and local authorities, but a wide range of organizations such as automobile clubs, private sector companies, the insurance industry, and others that can be instrumental in explaining and promoting road safety action plans and providing feedback.

Expensive items, such as police equipment and infrastructure improvements, have to be clearly targeted and tightly controlled to make sure that the country is getting the best value for money. Continuous monitoring and periodic evaluation is also important to verify that the projected benefits are actually occurring. Training, study tours, twinning with other countries or organizations, and improved data and research need to be closely linked to increased road safety programs and safety funding so that data and appropriate skills are applied to the problem.

It is important to note that developing countries should not blindly set casualty reduction targets of the type typically being

set in industrialized countries. These tend to be statements such as, "Reduction in 1993 number of deaths by 30 percent by the year 2000." Most industrialized countries are now at the mature stage of motorization and, in many cases, approaching or even exceeding theoretical saturation levels (see Section 2.2 and Figure 2.2 in Chapter 2). Consequently, their vehicle fleets are now stabilized, or at worst, are growing slowly and accident levels too have stabilized. Therefore, they can, with reasonable confidence, set targets for casualty reductions of 30 percent or more within 6 to 15 years and many (e.g., Australia, Denmark, Netherlands, New Zealand, and UK) have now done so.

Many developing countries are still approaching or just entering the explosive growth phase of motorization. Thus, private vehicle fleets will increase substantially in future years. During early stages of motorization, rapid increases in vehicle fleets inevitably result in accompanying increases in numbers of road accident deaths or injuries due to the populations' greater exposure to risk. Adopting a target such as "30 percent reduction on 1995 level deaths by 2000" may in reality require a reduction of 80 percent or more in the likely numbers of deaths that will occur by the year 2000, since actual deaths may rise by an additional 50 percent between 1995 and 2000 as a result of the previously mentioned increasing risk exposure.

Since it is politically difficult to use "road deaths will rise by only 40 percent by the year 2000" as a target, it may be better for developing countries to use targets related to the "lives or injuries saved" by various interventions. For example, introduction of seat belts and strict enforcement may result in the saving of xx lives, even though the actual numbers of total deaths may increase over the intervening period because of the rapid motorization. In this way, politicians can still set death and casualty **reduction targets** without getting into trouble with unachievable targets. This also helps focus political will towards specific interventions.

It is also important to establish behavior-related and other targets such as "percentage of drivers wearing seat belts to increase by xx percent," "kilometers of pedestrian footpaths increased by yy percent," or "number of pedestrian crossing facilities increased by zz percent," all by a set date.

These kinds of targets ensure that the types of behavior modification and increased safety facilities needed to reduce accidents or casualties are actually gradually occurring as the program is being implemented.

The development of effective safety policies and action plans suitable for a developing country and based on a well-thought-out program of road safety measures and targets is a complex task. It requires a level of expertise that may not be readily available in every developing country at this stage. Consequently, the road safety councils or other agencies may need some assistance. The development banks and bilateral aid agencies are often willing to assist countries in financing the necessary investment and related technical assistance needed for developing and implementing such action plans and programs.

3.6 Financing Road Safety Initiatives

Implementing a comprehensive and effective road safety policy and action plan is dependent on obtaining adequate funding. Although public budgets are often limited, road safety is a highly cost-effective activity involving the saving of human lives and reduction of economic losses. Therefore, a sharp increase in funding is often justified to finance a well-prioritized action plan based on cost benefit analyses. Each country needs to decide how best to finance its particular safety action plans at a level in accordance with its needs.

Comprehensive road safety programs require substantial funding and one leading safety specialist¹ suggests that potential sources of funding (which are not mutually exclusive) could include the following:

- 1) **budgets** of government departments and agencies are normally the main source of funding for all actions under their control, including safety actions, which cannot be fully separated from other functions. This also applies to provincial and local governments;
- 2) **road user charges** are sometimes directly allocated to road agencies for road management and investment. Charges for vehicle import and purchase, fuel, and road tolls are often considered to include an element of general government revenue and an element of user charge for road use. Charges for vehicle registration, driver licenses, and vehicle testing often recover all or part of the cost of these services, and may also raise additional revenue;
- 3) **roads funds** are one type of mechanism for allocating road user charges to road spending. These are established in a number of countries, often with the initial support of the ADB or the World Bank, to help stabilize the flow of funds to the road sector. They generally rely on user charges such as levies on fuel, tolls, vehicle taxes, or other sources that are related to the service provided, and incorporate increased accountability regarding priorities in road spending.
- 4) **road safety funds** have a similar function, but provide a pool of funds specifically for road safety actions that may be undertaken by a number of different agencies. Revenue is raised from levies on traffic sources (e.g., vehicles or gasoline) and expenditure, and priorities regarding safety are agreed with safety interest groups inside and outside government. This potentially ensures a priority to safety, which is independent of the concerns of individual ministries, and gives greater impetus to interministerial coordination of safety programs. Some countries (e.g., Botswana) use a levy on vehicle registrations to provide additional financing for road safety within a number of departments;
- 5) **private sector contributions** to road safety include sponsorship of media articles or road safety campaigns by motor vehicle dealers, oil companies, commercial firms, and transport fleet operators as part of their public relations;
- 6) **motor vehicle insurance** of road safety has been found, in many countries, to be particularly appropriate, and involving it in the decision making process can also be beneficial. Focusing on **accident prevention** rather than **repair** is cost-effective for the insurers and for the rest of society. Significant benefits can accrue for both parties through investment of insurance-related monies to reduce the number of accidents. Considerable incomes are being achieved from small levies on motor insurance in the State

of Victoria in Australia, and Finland. Fees corresponding to US\$21 per vehicle in Victoria and US\$3.6 per vehicle in Finland result in US\$56.65 million and US\$8 million, respectively, in these two countries. The levy is 10 percent in Victoria and 1 percent in Finland. Developing countries should consider imposing a levy of about 10 percent on third party insurance. This is discussed further in Sector Guideline 4.3;

- 7) **enforcement fines** provide extra income in a number of countries (due to the increased enforcement on speeding and drunk-driving) to be allocated to road safety. This can be used to purchase additional enforcement equipment and to finance other road safety initiatives that will help in the overall reduction of road accidents; and
- 8) **development banks** are increasingly willing to assist developing countries in tackling road safety problems. Opportunities should be taken, therefore, to take advantage of these sources of funds by including road safety components when such agencies are carrying out aid-funded projects in the developing countries of the region. For example, development banks can often assist in all three of the stated stages of road safety development.

During the initial stage of **raising awareness**, they can provide technical assistance to carry out the initial review of road safety to identify the major areas in need of improvement. In **stage 2**, they can often assist in the development of a strategy and five-year action plan and the implementation of a prioritized action plan. This would include the technical assistance required plus the cost of improvements that can be implemented as part of the action plan. In **stage 3**, aid agencies can assist in financing selected parts of the five-year program of activities. This could range from investment in infrastructure to improving the road safety aspects of road markings, road signs, or highway safety in general, to investment in other sectors, such as ambulance systems or equipment and training for traffic police services. Since development loans have to be repaid, these costs are ultimately borne by the governments concerned.

Road safety activities are highly cost-effective and **provide a higher rate of return than any other investment in transport**. Despite this, the current level of funding for road safety activities in most developing countries is far too low. Different sources of road safety funding may need to be applied for in order to get adequate funds to tackle the problem.

Table 1 shows the activities that may need to be funded and the potential sources of funding, some of which could be considerable.

Table 2: Road Safety Activities and Potential Funding Sources

Safety activity needed	Potential funding sources (categories may overlap)						
	Agency budget	User charge	Road fund	Road safety fund	Motor vehicle insurance	Development loan	Private sector
Safety coordination	✓	✓	✓	✓	✓	✓	-
Road infrastructure	✓	-	✓	✓	✓	✓	-
Traffic management	✓	-	✓		✓	✓	-
Information and advertising	✓	-	✓	✓	✓	✓	✓
Education	✓	-	-	✓	✓	✓	✓
Enforcement and inspection	✓	✓	-	✓	✓	✓	-
Accident data, research and studies	✓	-	✓	✓	✓	✓	✓
Emergency response and medical data	✓	✓	-	✓	✓	✓	-

3.7 Monitoring and Evaluation

All road safety activities should be monitored to ensure that money is being spent effectively and lessons are learned about the most and least successful schemes. Given that funds are always limited for such purposes, it is imperative that the money available is spent in the most wise and effective way to tackle the problem. As each initiative is implemented, the effectiveness of that measure should be monitored (ideally by looking at accident data from the before and after situation for equivalent periods of time).

Monitoring of an overall action plan aimed at institution building and strengthening the key agencies with road safety responsibilities must focus on whether the objectives of the action plan are being achieved. It is necessary to ensure that the activities of the consultants and specialist advisors have been effective and that the impact of such activity is having the desired effect in terms of strengthening the capability of the country to tackle the problem.

The use of monitoring frameworks is to be recommended and generally results in greater success in terms of implementation of action plans.

This identifies (in a framework format) exactly what activities are to be carried out as part of the action plan implementation and seeks to identify performance indicators that

can be used to see whether or not the desired impact has been achieved. They can be used during implementation to identify whether the project is progressing as desired in terms of development and institutional impact. In Fiji, an ADB/World Bank funded road safety action plan was monitored using such a framework. The action plan in Fiji has been highly successful in achieving its objectives of institutional strengthening. In addition, by the end of the action plan period, road accidents had already been reduced by about 23 percent. The frameworks and performance indicators used to monitor progress with respect to institutional impact in Fiji are presented in Appendix C for illustration.

References

1. Gerondeau, C. 1993. *Road Safety Financing and the Use of Motor Insurance Levies*: Proceedings of First Conference on Asian Road Safety (CARS1). Kuala Lumpur, Malaysia: JKR, Jalon Salahuddin.
2. Lundebye, S., and T. E. Wetteland. 1997. *Financing of Road Safety Actions*: Proceedings of Third African Road Safety Congress. Pretoria, South Africa: Economic Commission for Africa and Organisation for Economic Co-operation and Development (OECD).

Road Safety Guidelines for the Asian and Pacific Region

The guidelines cover 14 individual sectors affecting road safety, with four introductory chapters and four appendices. Information is presented in a series of freestanding documents that can be extracted for distribution and discussion.

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- 1:** Introduction and Background
- 2:** Road Safety Trends in the Asian and Pacific Region
- 3:** Road Safety Action Plans and Programs
- 4.1:** Coordination and Management of Road Safety
- 4.2:** Road Accident Data Systems
- 4.3:** Road Safety Funding and the Role of the Insurance Industry
- 4.4:** Safe Planning and Design of Roads
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- 4.6:** Road Safety Education of Children
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- 4.8:** Road Safety Publicity and Campaigns
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