3.1 In-country conditions conducive to Stage I activities

At the earliest stage of road safety development, several agencies and individuals may be involved in road safety activities for management of accident events, including the police and representatives of the Ministry of Interior and Department of Roads. These safety activities are not coordinated, and even accident records may not be properly documented and stored. Not much is known about trends in risks for road users or even the main organizations with road safety responsibilities. Remedial measures related to road accident reduction need to be dealt with through many different sectors and socio-economic approaches. The road safety issue has a multi-sectoral characteristic related to traffic law enforcement; legislation; engineering; vehicle safety; emergency services; driver training, testing and licencing; road safety publicity; children traffic education; and road safety research (see figure 1).

For the systematic planning of action and intervention required to tackle the problem of road safety, 14 major sectors are presented below:

1. Coordination and management of road safety,
2. Road accident data systems,
3. Road safety publicity and campaigns,
4. Traffic legislation,
5. Traffic police and law enforcement,
6. Driver training and testing,
7. Vehicle safety standards,
8. Safety planning and design,
9. Improvement of hazardous locations,
10. Road safety education of children,
11. Emergency assistance to road accident victims,
12. Road safety research,
13. Funding of road safety activities, and
14. Road accident costing.

These 14 major sectors of road safety are explained below.

Figure 1: Road safety is a multidisciplinary problem - All relevant agencies need to be involved
Coordinating and management of road safety

Road accidents involve social, economic, technological and overall development problems. Various government ministries such as Interior, Transport, Health, Justice, Defence, Education and Social Welfare and their agencies; public, private and personal transport operators; vehicle manufacturers; financial and insurance companies; and general road users are all concerned with the problem. The state must take a leading role and has a serious responsibility for the improvement of road safety. One fundamental step to be taken by the state is the creation of an organization dedicated to initiating and coordinating road safety activities.

Establishment of a national road safety council (NRSC) or other coordinating body with representation of relevant government agencies, non-government organizations and the private sector responsible or interested in road safety is vital. The major task of this coordinating body is to initiate and coordinate actions concerning management of strategies for the short-term and the development of long-term road accident management and road safety improvement plans, policies and strategies, with guidelines for implementation. The council's tasks also include horizontal coordination of all activities of the concerned parties as well as vertical coordination with regional and local organizations.

Road accident data systems

Accident data are essential to provide the basis for decision-making to improve road safety. Accident databases need to be established and decentralized so that they can be accessible to experts in all disciplines. Such databases enable analysis of the scale and characteristics of the problem in order that remedial measures can be devised at national and local levels. They also provide facts and figures to enable in-depth accident studies and research to identify issues and develop solutions. Periodic surveys provide the basis for updating databases.

Apart from the establishment of a database, accommodation of road safety databases with mapping facilities on microcomputers, linking road safety databases to other databases and linking central databases to regional databases, are required to support research and analysis.

3.1.3 Road safety publicity and campaigns

Changes in social attitudes about road accidents are the key to bringing about significant improvements in road safety, and effective road safety publicity is an important tool to achieve such changes. Widespread, well-targeted information campaigns undertaken regularly using modern means, as part of a comprehensive strategy to increase awareness of road safety, can create lasting changes in behaviour and attitudes among road users.

Campaigns must have deep emotional impacts on people depending on the local context and problems to be solved. Moreover, it is necessary to change programmes periodically to retain interest. When a new regulation is enacted, it is always necessary to launch a new information campaign. Effective publicity to target specific road behaviour and involvement of local authorities and various associations, especially automobile clubs, are important in national campaigns.

3.1.4 Traffic legislation

Traffic legislation provides a legal framework that enables concerned authorities to take action. In addition to legislation relating to roads, vehicles and drivers, legislation concerning speed zones, driving under the influence of alcohol, seat belts, motorcycle helmets and penalty points systems is required. However, details for penalties should be included within regulations rather than in the traffic legislation, to allow easier modification when needed in future. Furthermore, harmonization of legislation among neighbouring countries and within subregions of Asia and the Pacific would be helpful for effective implementation.

Legislation also needs to provide for the use of modern equipment such as speed detectors and alcohol testing devices. It would be worthwhile to develop a model traffic code appropriate for the country which should address issues concerning both non-motorized and motorized vehicles. For maximum effect, traffic legislation must also streamline judicial processing and prosecution procedures.

3.1.5 Traffic police and law enforcement

Traffic legislation alone, even when it includes large fines and penalties, has little or no deterrent effect, unless it is applied and
enforced effectively by traffic police. Enforcing compliance with road legislation is an important part of a comprehensive road safety policy, and a specialized traffic police force is an important asset in enforcement.

The system of controls and penalties is an important factor in accident prevention and the effectiveness of policies. The number of traffic police required depends on traffic volume and the number of road accidents. Provision of modern equipment to increase law enforcement efficiency and the positive image of traffic police, an enforcement strategy which can be effective for the system of penalties in a country and specialist training programmes to develop a trained force with enhanced working conditions and incentives based on performance are all important.

3.1.6 Driver training and testing

Driver training, testing and licensing are crucial. In many countries, new drivers are trained by friends or relatives. In some countries, training of new drivers is done in off-road areas, while some countries allow such training to be done directly on the roads in normal light traffic conditions. In some European countries, such training takes place after a person completes an accredited driving instruction course taught by professional driving instructors. No one way is best, and a country must decide which approach is most suitable. Regardless of how driving instruction is organized, traffic safety should always be a central objective of the driver training programme.

The methods for granting a driver’s license vary significantly among countries. Some countries give a full license immediately after someone passes a test, while other countries give a probationary license with the full license being given only after the driver has gained some experience and has shown a capability to drive safely.

Supervising and regulating education, training and retraining is the prime responsibility of the government, although private organizations can be allowed to conduct the actual education and training. Training requirements for special target groups, the licensing process, special rules for new drivers, and the establishment of special criteria in terms of age and experience for people who drive public service vehicles and heavier vehicles are matters of prime concern in this sector.

3.1.7 Vehicle safety standards

Harmonization of standards and procedures for safety inspections for vehicles is also important in dealing with road safety. Methods of approving vehicles imported into a country and the periodic inspection of vehicles already in service are important for vehicle safety standards. It is also necessary to ensure the compatibility of national regulations with one of the three major vehicle manufacturing standards in use. Special attention must be given to the method for granting approval for imported vehicles designed to transport dangerous goods, mandatory equipment and other restraining systems for all categories of vehicles. Periodic inspection of pollution emissions and sound levels also requires attention. Frequent thorough inspections of older vehicles should be made as part of any inspection system. Particular care must be taken to prevent import of vehicles which do not meet safety standards.

3.1.8 Safe planning and design

A number of countries which have adopted road safety targets expect that casualties can be reduced by about half in the medium- and long-term through road infrastructure improvements. Some infrastructure improvements, like new roads and expressways, may be costly investments, but much can be achieved from targeted low-cost improvements at locations where accidents occur frequently and from preventive activities such as safety audits and safety checking to create safer road networks. It is important that these low-cost treatments be prioritized on the basis of cost-benefit analysis in order to optimize the road safety returns.

In addition, safety auditing of new designs, maintenance and rehabilitation of roads by specialized safety auditors is important to ensure that safety is taken fully into account during the design process, to check that designs and plans are in compliance with existing standards and to ensure that good safety practices are included in the design.

3.1.9 Improvement of hazardous locations

Considering the increased urbanization in countries of the Asia-Pacific region and the growing number of fatalities and injuries which now occur in most cities and towns, it is necessary to reconcile the conflict between traffic and living functions in urban areas. The basic need is to establish a hierarchical classification of the road network based on road
There are now well-established "traffic calming" and speed reduction techniques which can slow the speed of vehicles and sharply decrease the number and severity of accidents. In future, the concept of "sustainable safety" should be adopted, which means ensuring that safety is a key criterion for all decisions concerning road infrastructure, vehicles and road users. The possibility of accidents and their severity should be reduced by prevention of traffic conflicts and reduction of traffic speed.

3.1.10 Road safety education of children

The aim of road safety education for children is to teach of appropriate survival skills covering topics which need to be covered gradually as the child progresses through school. Subjects taught, materials and methods will vary with the age of the children being taught. At the pre-school level, emphasis should be on the parents or care-givers, to inform them of the dangers when children play unsupervised near roads. As the child becomes more independent, the focus should be on the child and aspects such as walking to and from school, crossing roads, and getting in and out of vehicles.

3.1.11 Emergency assistance to road accident victims

Timely and effective assistance to road accident victims is important to reduce deaths and permanent disabilities. Assistance to road accident victims (through trauma management) can be seen as a process involving at least five steps: alarms, quick access to the scene, early diagnosis and therapy, transfer of the stabilized patient, and hospital treatment. Initiatives to organize and coordinate the rescue system is the primary responsibility of the state, although some services may be provided by non-governmental organizations and private enterprises.

3.1.12 Road safety research

Road safety research provides the framework for making effective policy decisions and for cost-effective investment in road safety. One prerequisite for effective road safety research is the existence of a national accident database which is accessible to all, defines the nature and characteristics of the problem and helps to monitor interventions.

Normally, universities and research institutes conduct research work or provide expertise in targeted research. However, development of one or two research centres for road safety research is desirable, and these centres should be linked to centres in neighbouring countries and within the region, so that a network of road safety researchers can exchange experience and information.

3.1.13 Funding road safety activities

State and local budgets from fuel and vehicle taxes or other sources, the insurance system, the private sector (such as oil companies and transport operators) and non-governmental organizations can all be considered as sources of funding for road safety activities. Income from fines can also be allocated, at least in part, to road safety activities. Funding assistance is now available from the World Bank and other aid agencies for road safety improvement or safety components in highway, transport, health or other projects.

Current expenditure on road safety is far below what is needed. Decision-makers should be made aware that road safety activities are highly cost-effective and funding increases are justified in order to finance well-prioritized action plans based on cost-benefit analyses. However, each country must decide how to best finance its road safety policy in accordance with its needs.

3.1.14 Road accident costing

Road accident costing estimates the socio-economic costs of road accidents. The costs of road accidents have traditionally been regarded as too difficult and insignificant to document. However, in developed countries, the regular, reliable costing of road accidents is extremely important, because it tends to encourage accident reduction schemes into justifying appropriate expenditures and proving their cost effectiveness. Without road accident costing, the only indicators of road safety problems are the accident and casualty figures reported by police, and these often suffer from severe under-reporting. In order to estimate the total economic and social costs of road accidents, comprehensive accident and casualty data are required. Once realistic estimates are available, the costs in lost output and medical services can be calculated and added to the accident-related costs of vehicle damage and administration.
Once the total extent of the human casualty toll and economic costs of road accidents are known, the road safety situation will be better understood by politicians and decision makers. They will encourage their governments to invest in improving road safety measures.

3.2 Primary focus/purpose of Stage I activities

The primary purpose of Stage I activities is to raise awareness among decision-makers from concerned agencies, organizations and institutions that road safety is a multi-sectoral, growing problem which needs coordinated urgent actions. Given the complexity of the problem, which includes road infrastructure, physical planning, development, management, administrative, legislative, educational, technological, financial, economic and social aspects, coordination is required. Rigorous effort may not produce many tangible results if it comes from only one or from a few sectors. However, coordinated efforts from several sectors can result in substantial effects.

3.3 Typical activities to be undertaken

The main activities which need to be undertaken include the following:

a) An interim working group needs to be established by drawing from senior staff in each of the agencies concerned with one or more of the 14 sectors (see section 3.1). This would function as a coordinating group until a more formal national road safety council (NRSC) can be established.

b) A review of road safety activities needs to be carried out to quantify the scale, nature and characteristics of the problem and identify deficiencies or weaknesses in the sectors and organizations related to road safety.

c) A national road safety seminar should be organized, involving senior personnel from all government agencies and non-government organizations with responsibilities or an interest in road safety (such as representatives from ministries, government organizations, large commercial companies, the insurance industry, and automobile manufacturers). Each of the main agencies could present a short paper on road safety problems and what needs to be done in their area of responsibility in order to tackle the problem. The national seminar should result in agreement among the key agencies on the actions to be taken.

3.4 Resources required and timescale needed for completion

The time needed to complete this stage can be as little as two to three months. The technical assistance of a specialist road safety adviser may be needed to carry out a critical review of existing road safety and to develop action plans. It is recommended that this be done prior to the organization of the national road safety seminar, so that the results can be presented at the seminar to all participants.

3.5 Sources of funding

There are a number of funding sources for Stage I activities. These fall into two types: (a) technical assistance (b) implementation costs.

3.5.1 Technical assistance costs

Technical assistance can be financed by development banks such as the World Bank or the Asian Development Bank (ADB) which often finance short-term technical assistance from their own funds or from trust funds. The development banks provide technical assistance in order to assist countries in putting together potential road safety components which might be later financed by such banks. Technical assistance is also available from bilateral agencies such as the British Department for International Development (DFID), the Japan International Cooperation Agency (JICA) and other bilateral aid and development cooperation agencies which are sometimes willing to provide experts to review road safety activities and to develop action plans. This type of assistance tends to be on a grant basis.

It is also possible for governments to use funds from existing development bank project loans in order to carry out reviews of safety. Both the ADB and the World Bank actively encourage reviews of safety so that a better understanding of problems and needs can be achieved. Countries should seek such assistance when bank project officers visit the country or via their contacts at the ADB and the World Bank.
3.5.2 Implementation costs

The only implementation costs involve organizing and carrying out the national road safety seminars. Costs tend to be minor and can often be financed through sponsorship from the larger automobile manufacturing companies, petrol companies or other commercial concerns which see involvement in sponsorship of road safety as part of their social obligations and public relations. The costs typically include the cost of printing posters and perhaps pamphlets and information about the seminar, plus publicity in the media, hiring an appropriate hall or conference room, the cost of logistics and the cost of refreshments. Sufficient time has to be spent in inviting the participants, drawing up a programme for the seminar and instructions for those presenting papers. Much of the technical input can be provided by the road safety specialist providing the technical assistance, and the administrative inputs can be provided by staff from any agency which is working with the specialist, usually the Ministry of Transport or another government department which has overall responsibility for road safety.

3.6 Impact of Stage I activity

The main impact of Stage I activity is to raise overall public awareness of road safety as an issue through media coverage of the national seminar, raising awareness and interest among major players who can influence road safety and raise willingness and commitment among the relevant government agencies. By consciously encouraging press coverage and providing articles, information and statistics to coincide with the national seminar, it is possible to build up public awareness and media interest prior to the seminar. It is particularly important to make some estimation of the annual losses to the economy resulting from road accidents. In the absence of detailed information or costings, it is possible to assume that road accidents cost the country at least one per cent of the annual GDP. In fact, the true costs often lie between one and three per cent of GDP, but assuming one per cent provides at least a minimum figure for general discussion.

National road safety seminar, Western Samoa