

Road Safety

in development cooperation



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CONTENTS

The cost of road accidents	6
Key aspects of road safety	8
Road safety is a multi-sectoral issue	11
Donor policies and strategies	18
Sida's guiding principles for road safety	21
Acronyms	22
References	23

Introduction

Road traffic injuries claim the lives of 1.2 million men, women and children around the world every year, and seriously injure 20-50 million, and the numbers are increasing. Developing countries account for a disproportionately large number of deaths and injuries. 70% or more of those killed or seriously injured are typically poor people, either 'vulnerable road users' or passengers in overcrowded buses. This implies that traffic safety is highly relevant to the fight against poverty. If current trends continue, deaths and disability caused by road traffic accidents will, by the year 2020, climb to position three on WHO's list of leading contributors to the global burden of disease and injury, even surpassing HIV/AIDS. Health authorities in developing countries use about 20-25% of their budgets on road accident victims, money that could otherwise be used to fight various diseases.

Road safety is thus a global health issue with implications for all aspects of human activities where travel and transport is involved. We cannot quantify the grief and suffering of indivi-duals and families caused by injury and death on the roads. But we know that the cost in social and economic terms to poor countries is staggering. These huge economic losses slow economic development and perpetuate poverty.

Road safety is closely linked to poverty reduction and sustainable economic development and in line with Sida's policy document 'Perspectives on Poverty', and the Millennium Development Goals set by the UN.

This position paper summarises the global road safety crisis and how it is related to poverty. It also provides guidance on how to tackle road safety issues in development cooperation. The paper builds upon, among other things, the World Report on Road Traffic and Injury Prevention, issued by WHO and the World Bank in 2004, and on the 'Vision Zero' philosophy established by the Swedish Road Administration. Its purpose is to serve as a guide to enhanced knowledge on road safety, to provide a common platform in the form of five guiding principles, and to stimulate discussion with our partner organisations in Sweden, with partners in cooperation countries and in international and bilateral organisations.

Road safety must be recognised not as a technical matter for transport specialists but as a cross-cutting issue in all activities where transport is involved in one way or another. Sida therefore needs to strengthen its knowledge of road safety issues across the board. Sweden can boast one of the best road safety records worldwide. The unique competence and experience within institutions like the Swedish Road Administration will be shared through staff exchange programmes and secondment of experts to partners in cooperation.

We encourage everyone concerned with road safety in the developing world to learn how road traffic injuries can be prevented and to stimulate the quest for enhanced traffic safety in agriculture, education, trade and transport, and health services. If the demand is present, much can be done to reduce this suffering and the threat to poverty reduction and development.

Rolf Carlman Head, Department for Infrastructure and Economic Cooperation

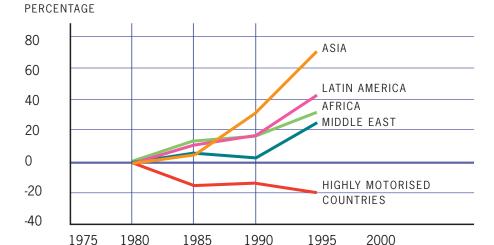
The cost of road accidents

THE HUMAN COST

Every day as many as 140 000 persons are injured on the world's roads. More than 3000 die and some 15 000 are disabled for life (World Bank and WHO, 2004). In 2002, road accidents killed 1.2 million men, women and children around the world and seriously injured about 20 to 50 million more. Rapid motorisation in the developing world is a major contributor to these ever increasing numbers.

This human and economic scourge disproportionately affects people in developing countries. Presently, 90% of road deaths are recorded in low-income and middle-income countries that only have 35% of the world's vehicles. An extreme case is the African continent, with only 2% of the total global vehicle population but 11% of all road traffic fatalities.

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Percent change in number of fatalities. Base year 1980. Source for figures in this chapter, unless otherwise stated: Global Road Safety Partnership (2003)

Globally, fatalities are forecast to rise as much as 66% by 2020 if the level of attention to road safety remains at status quo. However, the increase in low and middle-income countries is forecast to be 83%, while in high-income countries the traffic-related death rate will drop by 28% (Kopits & Cropper, 2003).

WHO (2004) estimates that if current trends continue, road traffic injuries will be ranked third among the leading causes of death and disability in 2020. The table below shows that traffic injuries would move from ninth to third position in this grim ranking list of major causes of death and disability, even passing HIV/AIDS.

Young adults (15-44 years) constitute the group that suffers disproportionately from road traffic injuries and death. This group accounts for between 50-75% of all road traffic fatalities. The figure for children aged under 15 is about 20% of the total road fatalities in developing countries (Downing & Sayer, 1983). Of all children killed in 2002, 96% were from low-income and middle-income countries (World Bank & WHO, 2004).

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RANK	2000	2020
1 2 3 4 5 6 7 8 9	Lower respiratory infections HIV/AIDS Perinatal conditions Diarrhoeal diseases Unipolar major depression Ischaemic heart disease Cerebrovascular disease Malaria Road traffic injuries	Ischaemic heart disease Unipolar major depression Road traffic injuries Cerebro-vascular disease Chronic obstructive pulmonary disease Lower respiratory infections Tuberculosis War Diarrhoeal diseases

(Source: Ezzati et al., 2003)

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ECONOMIC COSTS

The cost of road traffic injuries in economic terms is substantial. Countries can ill afford not to improve road safety for purely economic reasons, let alone for the compelling reason that human lives are too valuable to waste. Worldwide, the annual cost of traffic related death, injury and material damage is estimated at some USD 500 billion for the early 2000s. In low-income and middle-income countries the economic cost amounts to approximately USD 65 billion, which is a greater amount than these countries receive in development aid, and equal wto 1-3% of GNI.

Road crashes slow economic development and perpetuate poverty. Reductions in death and disability rates will not only release the pressure on medical facilities, but will produce savings that can be used to deliver better public services. This is of particular concern for the poor strata of the population, since the cost of road traffic injuries reduces the funds available for health and educational services, for example. In this sense, road traffic injuries constrain the opportunities for poor people to move out of poverty.

Much of the human and economic cost can be avoided.

This is well known and is addressed in high-income countries, where there is the realisation that investment in road safety usually gives a good rate of return. The potential cost savings from road traffic injury prevention are indeed substantial. In high-income countries, road safety actions in general yield economic returns ranging from 9% to 22%. Thus, road safety produces net economic gains (WHO, 2004). Unfortunately, no reliable data is available for low-income and middle-income countries.

The cost to low and middle-income countries is approximately USD 65 billion, which is more than these countries receive in development aid.

Key aspects of road safety

POVERTY

The victims of road traffic accidents differ by region, age, gender and road user type. In high-income countries most deaths and injuries occur to car occupants. In developing countries, however, the majority of road traffic fatalities occur among other groups of road users, such as pedestrians, cyclists, motorcyclists and users of public transport.

Thus, the modes of transport most frequently used by the poor are the modes with the highest fatality rates:

- In Africa and the Caribbean 40% of road traffic fatalities are pedestrians. But in cities the percentage of pedestrian casualties tends to be higher - with estimates as high as 80%, for example, in Addis Ababa (Jacobs & Sayer, 1984).
- Bus and truck accidents cause by far the most road deaths in some Asian countries; the figure for New Delhi, India, is 75%.
- In Asia, motor cycles and mopeds account for a disproportionately high percentage of fatalities; for example, Thailand with 70-90% (WHO, 2004).

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Poor families are disproportionately burdened by road accidents, particularly when the injured or killed is a breadwinner in the family. This problem is compounded in many developing countries by the fact that third party vehicle insurance coverage is low or non-existent. Victims and their families are thus frequently left without compensation for injury and loss. This is further compounded by poor, inaccessible or non-existent medical care and rehabilitation, leading to reduced chances of recovery or even survival. Thus, many families are pushed into poverty and many children are orphaned by road traffic accidents.

Although young children is not the group with the highest exposure to road traffic injuries, the numbers are high. International studies indicate that children from low-income families are much more likely to be injured as pedestrians than children from better-off families (WHO, 2004). Children in poor urban neighbourhoods are at especially great risk, the street being their only playground.

THE RIGHT TO THE ROAD

Applying the principles of a rights-based perspective and the perspective of poor people on development, roads should be safe and accessible for all road users, including persons with disabilities. Today, however, poor people in many countries are given little opportunity to choose a safe mode of transport for themselves, their families and their goods. Road traffic is not organised to allow road users mobility – be they pedestrians, drivers or mini-bus passengers – without facing risks of major injury. The increased motorisation in many countries creates a mix of traffic and speed that the roads were not built to accommodate. Pedestrians, motorcyclists and bicycle riders as well as non-motorised goods transport compete for space with fast cars, buses and trucks. In addition, there is lack of safety awareness, weak legislation and law enforcement to ensure safe road use. Emergency first aid response and medical care are generally in poor condition.

GENDER

Males of all ages are more likely than females to be injured in traffic. Within the group with the highest fatality rate (young adults), males predominate. Estimates by WHO indicate that the fatality rate among males is almost three times that for females of the same age group. Males in most developing countries are more likely to travel and engage in economic activities outside the home or farm than females and are thus more exposed to the risks of road accidents. Further, males tend to be less concerned with safety and are thus more likely to speed and engage in other reckless driving, including drunken driving. As children, boys often play in busy streets and roads.

A considerable number of young male adults have families of their own, and if they are killed or disabled the economic and social condition of the surviving family members can change dramatically for the worse. From that point of view the high fatality and disability rate among men in their productive age places considerable economic burdens on their families in general and their widows or wives in particular. In the case of disability, the burden of caring for the victim falls mainly on the women of the family. Women and children who themselves become road victims are less likely to receive medical attention.

HEALTH

The health system of the individual country usually bears the brunt of the road carnage. Health facilities and their often meagre budgets are greatly overstretched in dealing with survivors of road traffic accidents. Road injuries make up 25% of the total annual global injury mortality figure (WHO, 2000) and unless present trends are reversed, the cost of taking care of road traffic injuries will continue to grow at a high and increasingly unsustainable rate. Even today, road traffic victims occupy 30% of all hospital beds in some Asian countries (Asia Injury Prevention Foundation, 2003).

The transition of the burden of morbidity, mortality and disability towards injuries and chronic disease rather than infectious disease in many low- and middle-income countries poses a great challenge for their health care systems.

Hospitals and clinics are not prepared to deal with the increasing number of trauma patients due to road traffic injuries and other accident or violence-inflicted injuries. Pre-hospital and emergency care is weak or non-existent in many places.

HIV/AIDS

The prevalence of HIV/AIDS creates special problems in the emergency treatment and transport of road traffic victims. The need to avoid contaminated blood complicates emergency treatment, including medical care at hospitals. A particular problem is the meagre supply of non-contaminated blood for transfusion purposes. The fear of HIV/AIDS may also make people less inclined to help victims at the scene of an accident.

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ENVIRONMENT

There is a link between road safety and the environment. Improvements in road safety will improve the health and safety situation of road users and people living and working along a road, and at the same time reduce the negative environmental effects of road traffic.

On rural earth and gravel roads, dust is an environmental hazard for people living or working along those roads. Excessive dust may also cause accidents when drivers are blinded when trying to overtake through dust clouds. Speeding exacerbates the problems of dust and harmful emissions.

The continued and unnecessary use of leaded fuel in developing countries is an added health and environmental hazard.

In high-income countries, bus transport is considered both less polluting and safer than riding in passenger cars. This is not necessarily true in many developing countries, where inadequately trained drivers handle old, overcrowded, poorly maintained buses. This creates both environmental damage and unsafe travel conditions for passengers and other road users.

The safe and professional movement of hazardous cargo is of great importance to road users, the people living and working along those roads as well as the environment.

ROAD DESIGN

In spite of much global research and empirical evidence, roads in many developing countries are still often not designed and built according to even relaxed safety standards. This is perhaps less because the design engineers are not aware, but more because of misguided attempts to keep immediate construction costs down. Rectifying 'black spots' usually commands a much higher price than doing things right at the outset. But as long as it is possible for an investor or ministry to pass on the costs of negative side effects to others — in this case the victims and social sectors — 'killer' highways will continue to be built. IFIs and donors involved in such projects should accept part of the responsibility for the situation.

CORRUPTION

Good governance is yet another prerequisite for implementing a safe environment. In corruption-prone environments, safety is all too often compromised when officials are bribed to issue road worthiness certificates or driver's licences, or to turn a blind eye to a driving offence. In many cases the legislative framework may be adequate but enforcement is weak.

STATISTICS

In order to provide a firm decision base for interventions in road safety and monitoring of results, reliable data must be collected and processed. Sound statistics are crucial in highlighting road traffic injuries as a major public health problem. In most low- and middle-income countries, records produced by the police or the health authorities under-report the real numbers. Continuous, systematic surveillance of road traffic accidents and injuries within the medical, road, transport and judicial sectors is necessary, in combination with community-based household surveys. Collection of road traffic injury and accident data must be as integrated, accurate and timely as possible, and it is very important that all stakeholders agree on how to share, compile and disseminate the data. When designing a system for data collection and reporting format it is important to be sensitive to local needs.

Unsafe roads are still being built, often because of misguided attempts to keep immediate construction costs down.

Road safety is a multi-sectoral issue

NEED FOR A BROADER PERSPECTIVE

Road safety is often seen in fairly narrow road transport terms. However, statistics and studies clearly show that road accidents are a growing public health concern with implications for the poverty reduction efforts and the economic development of a country.

Road safety is a multi-sectoral issue and in order to improve road traffic conditions there is a need for close coordination and collaboration across many sectors and many disciplines. In many countries, however, there is no agency with responsibility for the coordination of road safety inputs from outside the core transport sector. Even if there are such agencies in place, they are generally too weak and lack firm political support and commitment to the issue.

To resolve this problem and effectively reduce the numbers of deaths and injuries on the roads, a coordination agency with constitutional powers is essential. Political will and commitment at the highest level is an imperative. In addition, there is a need for support from the private sector, NGOs and civic organisations. The international community may need to assist in 'brokering' such cooperation and in the formulation and implementation of multi-sectoral or inter-sectoral approaches. This has been explicitly stressed in recent global policies and strategies (UN, 2004; WHO, 2001, World Bank & WHO, 2004) as well as by three consecutive UN resolutions (latest 11 May 2004) and the World Health Assembly on 22 May 2004. These publications contain a great number of recommendations and guidelines for member states.

Improving road traffic conditions calls for close coordination and collaboration across many sectors and many disciplines.

ACCIDENT AND INJURY PREVENTION STRATEGY

Road traffic accidents are predictable and therefore preventable. Two types of interventions are needed to improve road safety:

- Efforts to prevent road traffic accidents and injuries from happening through improvements in, for example, community planning, road infrastructure, traffic management, law enforcement, training of drivers, education and awareness campaigns;
- Measures to reduce the harm done when accidents do occur, for example, through 'forgiving' road design, vehicle safety enhancement, legislation on seatbelts and helmets, effective emergency rescue services, medical care and rehabilitation.

Road safety needs to be addressed through a systems approach, which means taking into account three factors: the road environment, the vehicle and the human being. Each of these three components contributes to accidents and to their severity. Human error, by drivers or other road users, is always a risk. Thus the road environment must be forgiving of such errors and both minimise the risk for mistakes and minimise harm when they occur. Vehicle shortcomings, both in regard to design and physical condition, are other factors that increase the likelihood of road accidents and road injuries. These different risk factors sometimes interact in complicated patterns. A systems approach is needed to identify such risk factors and the countermeasures that may be taken.

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COORDINATION

Effective road safety work requires the engagement and the concerted forces of many sectors and disciplines. At government level a number of ministries are often responsible for different aspects of road safety work as part of their day-to-day activities.

MAIN FIELD OF ACTIVITY	TYPICAL GOVERNMENT STRUCTURE
Planning, construction and maintenance of roads	Ministry of Roads or Road Agency
Traffic laws, vehicle inspection and registration, driving licences	Ministry of Transport
Enactment of laws, law enforcement	Ministry of Justice or Interior
Data collection and processing	National Bureau of Statistics
Road safety training in the educational system	Ministry of Education
Emergency medical services, rehabilitation of accident victims	Ministry of Health
Urban roads and urban transport management	Urban Communities

Coordination and collaboration among several relevant sector ministries is necessary in order to make a sustainable impact on road traffic conditions. In addition, each ministry must integrate road safety into its day-to-day activities and also cooperate with non-governmental actors.

A National Road Safety Council (NRSC) or the equivalent is usually needed to coordinate all stakeholders concerned. The council should ideally be composed of representatives from all concerned ministries; non-governmental organisations; the mass media; and the private sector, such as bus and truck operators, drivers' associations and insurance companies.

The management responsibilities of a National Road Safety Council and its Executive Committee can be seen as a Road Safety Management System with a number of core activities.

Such activities typically include:

- Appropriate traffic legislation backed up by law enforcement;
- Accident data systems to correctly determine the size and scope of the road traffic injury problem, impacts of accident and injury prevention programmes, etc;
- A road safety action plan, to help draw attention to the mag nitude of the problem among policymakers, schedule specific actions and allocate resources.

National Road Safety Councils are needed to coordinate stakeholders from ministries, NGOs, the mass media and transport and insurance companies.

IMPLEMENTING PREVENTION MEASURES

Road infrastructure

The quality of the design, construction and maintenance of roads is a crucial factor in road safety, but frequently inadequate in developing countries. Existing roads were seldom built for the traffic mix of today, so fast motorised vehicles, pedestrians and non-motorised transport have to share the same road area. When new roads are built, emphasis is usually on speed, not safety. Road reserves are not respected or enforced, and encroachment by houses, shops or other fixed objects as well as numerous hawkers on foot may force pedestrians off the road shoulder to mix with fast-moving traffic.

Ensuring an adequate road infrastructure from a road safety point of view differs between urban and rural settings. Generally speaking there is a larger need for adequate physical planning in the urban environment, including land use and traffic planning, in order to ensure adequate road safety conditions. But this is also the case where rural roads, in particular main roads, pass through villages. In such cases there is a need to consider both community planning in general and making the road safe for pedestrians, people living and working along the road and slow-moving traffic. A high degree of community participation is essential

Road Safety Audits have become a powerful tool for the construction and maintenance of safer roads. In the case of new construction the road is examined for safety while on the drawing board, and then at all stages of implementation. Similarly, for existing roads, conditions on site are examined with a view to detecting potentially dangerous spots or designs, and subsequently proposing

remedial action.

Legislation and law enforcement

The basis for effective road safety work is sensible road traffic laws and regulations and the determination with which such laws are enforced. The national legislation must take into consideration the need for a balance between people's mobility needs and road safety. Four aspects of legislation (and attitudes) are of particular importance: speed, alcohol, safety belts, and crash helmets for motorcycle riders.

Enforcement of existing legislation is of particular importance. Unfortunately, weak or nearly non-existent enforcement is the norm in many low-income countries. The existence of an efficient traffic police organisation is crucial to surveillance and enforcement of laws and regulations.

In this context it is particularly important to be vigilant against all forms of major and petty corruption. In many cases it is all too easy to buy one's way past a vehicle inspection, an overload control, etc.

Vehicles

Two properties of vehicles are most relevant for safety. The first is the ability of the vehicle to protect its occupants when a crash has occurred or is about to occur. The second is the ability of the front of the vehicle to protect, or not to hurt, pedestrians and others when the vehicle hits them or is about to hit. These two properties are best influenced by a New Car Assessment Program NCAP, by which purchasers of new cars are made aware of these properties.

In low-income and middle-income countries, the mechanical condition of a considerable portion of the vehicle fleet is often poor and a danger both to its

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passengers and to other road users. This is exacerbated by typically poor maintenance awareness. Compulsory and regular vehicle roadworthiness inspection, at least for public transport, is one of the tools for reducing the number and severity of accidents.

Implementation of a vehicle register – preferably computerised – is necessary for surveillance and accident reporting by the police, as well as for safety inspections of vehicles.

Driver licensing

Human error contributes to the majority of road accidents all over the world. Thus driver skills and attitudes are essential elements of road safety. Drivers' training should therefore be at an appropriate level. A drivers' licence register is a valuable tool for both enforcement and for following up of driver competence

Education

Children need to learn how to behave in and around traffic.

The usefulness of traffic awareness training in schools is debated. On one hand it may induce a false sense of security in children and their parents and thus do more harm than good. Others claim it is useful both as a way to prevent accidents involving children, and to foster a permanent and positive attitude to safe behaviour. Education for adults and children in countries with limited school attendance need to be arranged in other ways, for example with the assistance of NGOs and other civil society or governmental organisations.

Information to, and training of, journalists and other media staff in road safety and injury prevention are important aspects of road safety work, since journalists and media play an important role in raising the profile of the problem and in road safety campaigns.

Publicity campaigns

Publicity campaigns can be effective as a means to support the introduction of new regulations. They often target certain events and groups, for instance the start of the school semester or a holiday season with many infrequent drivers on the roads. They should be closely coordinated with related enforcement programmes, as the evidence suggests that they are not effective in isolation.

Children need to learn how to behave in and around traffic.

Transport and insurance companies will both win if they help improve road safety.

The health sector has a strategic role in setting overall safety improvement goals.

Transport operations

Trade and transport operators are exposed to the shortcomings of the roads in their daily work. Their drivers and passengers risk being killed or injured and their vehicles and cargo damaged or destroyed. Road accidents amount to a non-physical barrier to trade and transport operations. Traffic management and road safety work are but two sides of the same coin.

Similarly, insurance companies have a direct interest in reduced accident rates. There is thus a win-win situation for transport and insurance enterprises to assist in the improvement of road safety. This can be done through a partnership between businesses, central and local government agencies, and representatives of civil society, and involve different but interconnected sets of activities:

- Initiate or participate in campaigns aimed at the political leadership, basically at national level, to give more attention and priority to road safety.
- Lobby regional or sub-regional organisations (such as the Economic Communities or the Greater Mekong Sub-region states) to improve and harmonise road safety conditions along transport corridors. The introduction of common road traffic regulations, uniform road design criteria, etc. would facilitate transport operations and contribute to improved road safety conditions.
- Voluntary regulation of certain aspects of road transport operations would make operations safer and more profitable for companies. Driver training and codes of conduct covering issues like abstaining from alcohol and drugs before and while driving, keeping to speed limits, not overloading trucks and buses, as well as minimum standards for the maintenance and mechanical condition of vehicles can form part of a self-regulatory system.
- A concept of 'Safe Transit/Transport' could add value to the marketing of transit/transport corridors and help reduce overall transport costs. Such a concept could have its basis in a number of measurable parameters, ranging from accident statistics, mobile phone coverage to perceptions of corruption.
- Working with regional and sub-regional organisations and transport corridor groups can sometimes be a more effective use of international road safety support than working at national or sub-national level.

Health

In addition to the obvious responsibility of the health sector to provide and develop emergency treatment techniques and post-medical care and rehabilitation for road traffic victims, it is also well placed to:

- collect, compile and disseminate injury statistics;
- determine behavioural aspects leading to road traffic injuries (e.g. drinking/driving habits) or preventing them (e.g. seat-belts/helmets);
- compile and disseminate information on road traffic injury prevention, for example the impact of road traffic on health, and the cost for medical care and rehabilitation of road victims.

It should also be noted that the health sector has a strategic role in setting overall safety improvement goals. The health sector should have a clear view of the scale of the health loss being incurred by the transport system and what might constitute an acceptable level of performance. Integrated hospital-based surveillance of road traffic injuries is an important tool for advocacy, evaluation and monitoring of prevention efforts.

Information and research

There are considerable gaps in our knowledge of the extent, the causes and the impact of road injuries on individuals and households, both in human and economic terms in developing countries. Improved systems for data collection, compilation and analysis are required as well as improved modes of disseminating such data. Including questions relating to traffic injury in standard household surveys would be a major step forward in improving our understanding of the problem.

Research is required to understand the complex technological, physical and psychological process involved in road accidents and their consequences. Much of the knowledge developed in high-income countries can be of considerable assistance in planning for and implementation of research activities in low-income countries. Due to the different nature of road accidents in low-income countries, more knowledge is required on the risks and vulnerability of pedestrians, two-wheelers and public transport operations.

The field of injury prevention takes on specific importance in developing countries, if only for economic reasons. Experience of injury prevention in industrialised countries may be extended to developing countries, but such experience needs to be adapted to the specific conditions of the developing countries. This type of knowledge transfer requires research in the adaptation and modification of interventions proven useful in industrialised countries.

In addition to a national road safety agency with responsibility for the coordination of all road safety work in a particular country, research institution(s), are needed to undertake independent applied research and to provide advice and guidance on road safety matters.

Experience of injury prevention needs to be adapted to the specific conditions of developing countries.

Donor policies and strategies

POLICIES AND STRATEGIES OF OTHER DONORS

Road safety as an issue has met with steadily rising interest in the last few years, indicating a growing concern about the appalling carnage on the roads, particularly in the developing world.

United Nations

Although road traffic injuries have been among the top global causes of death for many years, it was only recently that the issue became a significant topic of discussion in the UN General Assembly. The first step was Resolution 57/309, passed on 22 May 2003. In August 2003, the UN Secretary General submitted a report on the global road safety crisis to the UN General Assembly. Based on this report a second and third resolution were passed by the UN General Assembly on 5 November 2003 and 11 May 2004. The resolutions express great concern over the rapid increase in traffic fatalities and injuries worldwide. They recognise that effective action requires strong political commitment, and they call upon member states, international organisations (WHO in particular), the private sector and relevant NGOs to participate actively in promoting road traffic safety.

WHO

WHO has been working with road safety issues over a number of years. In order to provide a focused assistance to member states, WHO formulated a 5-year Strategy for Road Traffic Injury Prevention (WHO, 2001) as a part of the preparation for World Health Day in 2004.

In 2004 the World Health Assembly published Document WHA57/10, and WHO and the World Bank jointly produced the World Report on Road Traffic Injury Prevention. These publications contain a comprehensive set of recommendations and guidelines for developing states and donor states alike, on how to formulate and implement national policies and strategies for road traffic injury prevention, identifying focal agencies and improving surveillance.

Other Donors

The general approach adopted by a number of donors is to include road safety aspects in the planning and design phases of road and road traffic projects.

The Asian Development Bank published a Regional Road Safety Strategy and Action Plan, called Arrive Alive. ADB aims to mainstream road safety in all road projects. The ADB is also promoting road safety work in a more general sense throughout the region, for example, through the document 'Road Safety Guidelines for the Asia and Pacific Region', which is designed to help senior policy makers. A regional road safety fund for the ASEAN region is in preparation.

The World Bank is preparing a road safety strategy and has contributed to road safety development by initiating the Global Road Safety Partnership, GRSP, in 1999. GRSP has since attracted interest from international organisations, bilateral donors, the business community and NGOs. A Global Road Safety Facility (GRSF) was recently established (Autumn 2006). It is intended to be funded by the Bank itself, by private institutions and by bilateral donors. One of the aims of the facility is to provide seed money to countries for demonstrations of good practice. The Sub Saharan Transport Policy Program (SSATP) has included a traffic safety theme in its present workplan. Sida sponsors a seconded road safety expert from SRA to SSATP.

SIDA'S TRANSPORT POLICY FRAMEWORK

Sida has yet to develop an integrated, multi-sectoral road safety policy. However, road safety is to some extent covered in some of the sector policies of Sida. In the Health Policy road injuries are seen as a growing threat to health in low-income countries. Injury prevention, including traffic injury prevention, is identified as an important area for Sida support. The Urban Transport Policy has selected five priority areas in which road safety is represented as part of comprehensive urban planning, improvements for non-motorised traffic including pedestrians, and traffic management. A future Transport Policy will take a holistic view of the objectives and priorities of road safety.

SWEDISH GOVERNMENT POLICY

Vision Zero (see next page), which is the official Swedish road safety policy today, was formulated by the Swedish Road Administration.

It is built on new thinking but is based on many years' experience of road safety work. Vision Zero makes a point of dividing the responsibility for safe driving between the road owner and the driver. Safety design means designing the road for failure rather than for success, that is: accidents will occur, but an accident should not lead to serious injury or death – the design should be 'forgiving'.

Vision Zero takes the well-being and safety of the individual as a point of departure, and is therefore relevant to Sida's development work. It is also argued that this vision, with some adaptation to local conditions and culture, can be applied in any country.

In line with Swedish international cooperation policy, Sida will work with relevant Swedish government agencies, the private sector, civic organisations and NGOs to transfer knowledge and build capacity in developing countries, applying and adapting Vision Zero principles and experience in diverse settings.

Another aspect of Swedish government policy is to make Sweden more visible in international organisations. Placing professional staff on secondment to UN organisations, the World Bank and the regional development banks can be an effective means of disseminating Swedish expertise and experience globally.

SWEDEN'S COOPERATION WITH OTHER DONORS

Recognising that the road safety crisis is global and that Sida offers direct support to the transport sector only in a handful of countries, it is natural to cooperate with other donor organisations on the global or regional scene, and also to extend support through trust funds operated by some of these organisations. Through active membership in steering committees for such trust funds, Sweden has the opportunity to provide expertise and to use influence to benefit these programmes.

As an add-on to trust fund arrangements Sida can offer funding of secondment of experts and junior experts (JPOs) on limited-term contracts.

VISION ZERO

recognises that mistakes will be made and that accidents will happen. An accident, however, need not have devastating consequences. The personal injury, and not the accident, is seen as the main road safety problem. Responsibility for the damage and the degree of damage can be placed with professional parties, that is, system designers such as road engineers, physical planners and vehicle manufacturers. This provides a natural division of responsibility for road safety so that system designers are responsible for limiting personal injury while road users are, as before, responsible for seeing to it that accidents do not happen.

The human body is not designed for impacts at high speed. The chances of survival for an unprotected person fall drastically at speeds exceeding 30 km/h. Hence, there is a clear argument for reduced speed where pedestrians move near vehicular traffic. Similarly, where conditions off the road are dangerous, we would demand protective barriers, etc. In short: Integrate traffic on the conditions set by the weakest part, that is the pedestrian. Separate traffic when the desired speed (and kinetic energy) is higher than the tolerance of the human body. Typical measures include mid and side barriers, roundabouts, speed bumps, separated sidewalks and bicycle paths in urban areas.

In addition, a New Car Assessment Programme could assist in design alterations of cars in order, for instance, to make them less aggressive to unprotected road users, and, obviously, culturally adapted training and incentive programmes to reward good traffic behaviour. The latter is NOT an alternative to the former two, but an important complement.

Sida's guiding principles for road safety

- **1.** Sida shall recognise the global road safety crisis as a crosscutting issue in all relevant sectors. Road safety shall therefore be considered not only in road programmes but in every project or programme where travel and transport is a component. This implies that road safety is also an issue in physical planning, water, agriculture, health and education programmes.
- **2.** Policy-making shall be an integral part of Sida's support for road safety. Sida's policy support shall be based on 'Vision Zero', which is part of the official Swedish road safety policy. Its principles are universal and applicable regardless of the level of development.
- **3.** Sida shall liaise and cooperate with other Swedish government agencies, the private sector, civic organisations and NGOs in its work with road management in general and road safety in particular. As part of its efforts to increase its competence, Sida shall also aim to establish a staff exchange programme with other government agencies.
- **4.** Sida shall enhance cooperation with, and seek to influence, programmes within and outside the UN system, including International Financing Institutions involved in road safety. It will support interventions for road safety globally, regionally and in individual countries.
- **5.** Sida shall aim to place seconded traffic safety experts in programmes managed by these agencies and organisations.

Acronyms

GNI Gross National Income

GNP Gross National Product

GRSP Global Road Safety Partnership

IFI International Financing Institution

NGO Non-Government Organisation

NRSC National Road Safety Council

NTF National Society for Road Safety

NBS National Bureau of Statistics

RSAP Road Safety Action Plan

SATCC Southern Africa Transport and

Communications Commission

Sida Swedish International Development

Cooperation Agency

SRA Swedish Road Administration

VTI Swedish National Road and Transport

Research Institute

UN United Nations

USD US Dollar

WHO World Health Organisation

References

Asia Injury Prevention Foundation (2003) Safe Roads Asia

Asian Development Bank (2005)

Arrive Alive, Regional Road Safety Strategy and Action Plan (2005-2010)

Ezzati, M, Lopez, AD, Rodgers, A and Murray, CJL, eds. (2003) Comparative quantification of health risks: global and regional burden of disease due to selected major risk factors Geneva, World Health Organization

Global Road Safety Partnership (GRSP) 2003 Annual Report

Jacobs G, Aeron-Thomas, A and Astrop, A (2000)

Estimating Global Fatalities, TRL Report 445 Transport Research Laboratory
Crowthorne

Jacobs, GD and Sayer, IA (1984)
Road accidents in developing countries – urban problems and remedial measures
TRRL Supplementary Report 839. Crowthome: Transport Research Laboratory

Kopits E. & Cropper M. (2003)

Traffic Fatalities and Economic Growth
Policy, Research Working Paper No. 3035, World Bank, Washington DC

Sayer, IA, and Downing, A (1981)

Driver knowledge of road safety factors in three developing countries

TRRL Supplementary Report 713. Crowthome: Transport Research Laboratory

UN (2004) *Global Road Safety Crisis*, a report on the Plenary Session of the United Nations General Assembly to Discuss Global Road Safety, April 14, 2004

WHO (2000) Global Burden of Disease 2000.

WHO (2001) A 5-year WHO Strategy for Road Traffic Injury Prevention

WHO (2004) Road Safety Is No Accident

– A Brochure for World Health Day, 7 April 2004

World Bank and WHO (2004)
World Report on Road Traffic and Injury Prevention

Halving poverty by 2015 is one of the greatest challenges of our time, requiring cooperation and sustainability. The partner countries are responsible for their own development. Sida provides resources and develops knowledge and expertise, making the world a richer place.



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