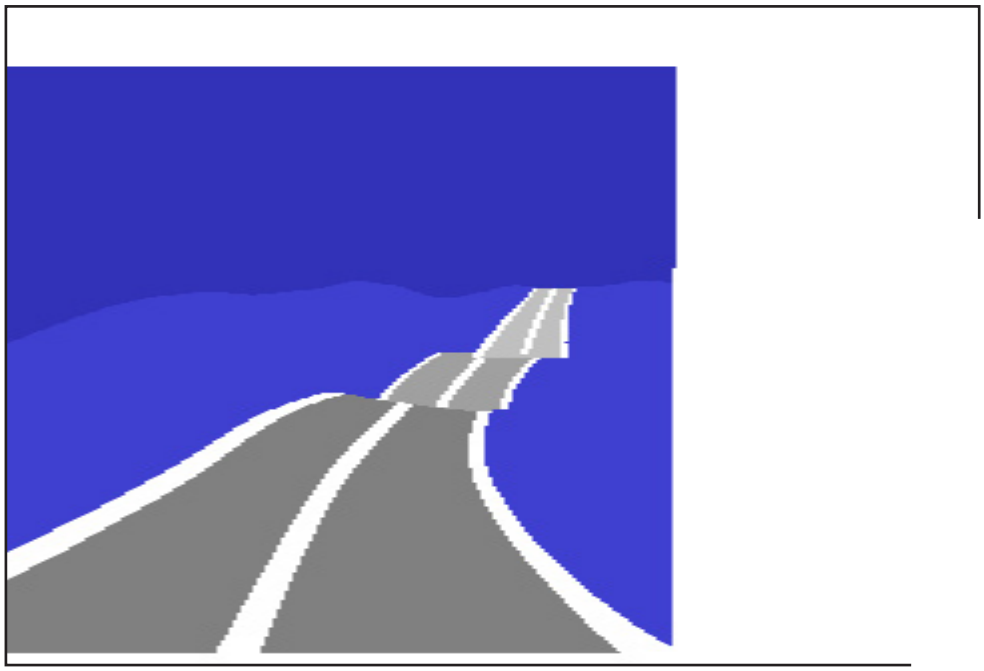
International
ROAD SAFETY STRATEGY



White Book

Proposals for road safety measures
made by PRI

Members of PRI:
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INTERNATIONAL ROAD SAFETY STRATEGY

WHITE BOOK

May 2000

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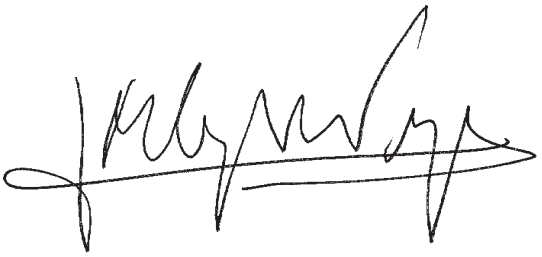
FOREWORD

The question as to which additional measures and methods can still be used to further increase traffic safety often remains without an answer. Some generally well known actions are then put forward and implemented more or less successfully. The White Book of PRI, which is based on the report of the high level expert group for a European policy for road safety, is an attempt to list all possible activities in the field of traffic safety in a comprehensive way. It is thus an inventory and a guide for all those who deal with road safety with the clear condition, however, that all measures of this catalogue must take account of national, regional and local considerations and be part of a global package of measures.

Naturally, the White Book only reflects current knowledge and must continuously be adapted, completed and developed following the latest research findings, so as to always remain topical. The present version has been revised in 1999/2000 within the Executive Committee of PRI.

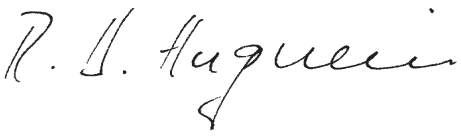
With this White Book we hope to give a contri-bution to the road safety specialists in their often difficult task.

President of PRI



José Miguel Trigoso

Chairman of the Western European Coun-



Raphael Denis Huguenin

The 5 E's – Education, Environment, Engineering, Ergonomy, Enforcement

Driving is influenced by many factors. Some stem from the environment, others from people. The factors of external origin are reasonably well known. These originate from the surroundings in which the individuals are moving, from the roadway on which they are travelling, from the more or less heavy traffic, from the road signs, from the state of the vehicle, from the possible presence of passengers, from the relief and from the climate. The influence of the environment and the climatic conditions are determinant for man. The behaviour cannot be separated from its context.

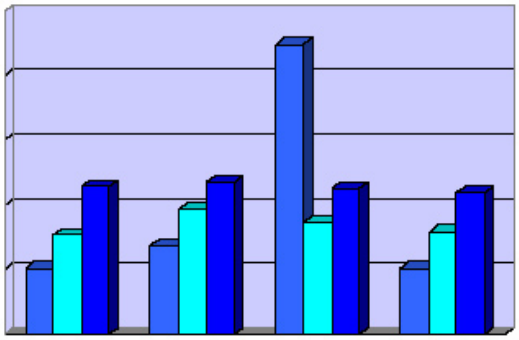
Road safety education for children cannot be limited to the teaching of knowledge and facts. It requires the development of their ability to adapt to diverse situations in traffic as well as their preventive attitudes. These efforts are only credible if the traffic situation is adapted to the children's needs (e.g. traffic calming in districts).

Factors which relate to the constraints sometimes imposed upon drivers due to their profes-sional activity must also be considered. The journeys of certain lorry drivers have sometimes been described as „mission impossible"; the requirements of the timetable must have an influence on their behaviour. In general, when treating the factors of risk in traffic, these are often categorised as concerning man, vehicle and environment. This is a useful classification, but for the reasons which have just been cited, another factor can often be added: the driver's task.

Even if there is still much to be done, great progress has been made in improving the environment of the driver and the safety of vehicles. Human behaviour is being taken more and more into account in the design of road infrastructure and urban roadways. Modifica-tions carried out on infrastructures and on their surroundings at certain points, or on certain axes, can influence road users to progressively reduce their speed or to cross intersections under good conditions.

Progress has also been made in the design of vehicles to influence the behaviour of car drivers. For example, warning lights or sounds indicate that the seat belts have not been buckled, that the doors are not properly closed, that the maximum allowed speed has been exceeded. This progress is, however, far from being available to all. In particular in countries where road safety is still a concept in face of the urgencies with which the authorities are faced; thus, in many countries, the road infrastructure is little developed, the vehicles in circulation are often old and technical checks are non-existant. Thus, legislation and en-forcement has to be improved as well, in order to implement new technologies and behavioural recommendations.

BASES



Knowing the risk factors is an indispensable prerequisite to the design and implementation of preventive measures. An important source of knowledge remains in the accident reports written by the police of each country. However, the definitions of accident - with injured and killed persons - differ, which makes com-parisons between countries difficult, and hardly allows an evaluation of the level of road safety in each country.

Research on road safety must be pursued to understand better the accident factors, and to base preventive action on these results. It is desirable to exchange research results between the community and other countries.

Determining the perception of road users towards road safety and accident prevention before acting, and appreciating the differences and similarities of opinions between different countries would be very desirable before transferring methods.

Continued traffic safety campaigns, which are planned according to modern marketing strategies and go beyond the communication of information.

tics and harmonise the definitions as well as the accident descriptions in order to facilitate comparisons between countries and establish

Proposal: 1/1

Collect in each country road accident statis-

accidents.

Proposal: 1/2

Increase international commitment to research in road safety and open community research programmes to other countries.

Proposal: 1/3

Periodic renewal of internationally co-ordinated opinion polls would be desirable in order to be able to follow the evolution of public opinion towards the main questions of accident prevention in the various member countries of our organization.

Proposal: 1/4

Set up a permanent information system of all road users to make them know the new road signallings and regulations.

Proposal: 1/5

Drinking and driving should be a priority theme in accident prevention campaigns.

MEASURES

2.1 Behaviour

All the efforts made to influence the behaviour of pedestrians and drivers by various and complementary actions on their environment, will not have their full effect unless it is also possible to act on the drivers themselves.

Bases have to be given in early childhood by adequate education until children and youngsters become a driver.

A good driver training needs not only good instructors but also time. Throughout this time, it must make clear to the learner driver how to anticipate risks and how to avoid them. It is desirable that young people who do not parti-cipate in a course for future drivers should also benefit from a lengthy training. To this end several countries have introduced a proba-tionary driving license. No matter how many efforts are undertaken to improve the initial training of drivers nothing is ever finally gained in the field of behaviour.

The training of trainers is also very important as it determines the training of drivers. In as much as driving is not merely a technical and judicial activity, but mainly a social activity, it is important that trainers receive a training with a minimum of human services, prevention and road safety.

Today there exist many and varied means of transmitting information, because of this they can contribute to preparing public opinion for new regulations and participate in the development of behaviour.

Proposal: 2/1/1

Road safety training, ensured by competent staff having themselves received a specific education and road safety training and having at their disposal educational equipment of high quality, should be given to school children in all countries.

Proposal: 2/1/2

Study the results obtained in the various countries which have introduced a provisional driving license, and if this is justified generalize the principle to other countries. In particular, develop and introduce continued training elements for four-wheel-drivers and bikers.

Proposal: 2/1/3

Implement training and licensing adapted to each category of two-wheeled vehicles.

Proposal: 2/1/4

Integrate the young people in all road safety activities for young people with the co-opera-

tion of road safety associations as well as with civil and military services related to young people.

Proposal: 2/1/5

Implement a continued training of offence drivers with the support of information courses which aim at favourably influencing drivers' attitudes and behaviour patterns.

Proposal: 2/1/6

Set levels and duration required for trainers, starting from the knowledge how [illegible] behaviour [illegible] which to teach to drivers,

made by the members of the Prévention Routière Internationale world-wide, TV messages, posters, press articles, Internet etc. - into a

Proposal: 2/1/7

Gathering of the information cam-paigns „bank" of information and exchange could be very useful.

Proposal: 2/1/8

Set up a permanent information system of all road users to make them know the new road signallings and regulations.

Proposal: 2/1/9

Use marketing principles for road safety promotion.

Proposal: 2/1/10

Develop comprehensive programmes for the problems of infrastructure and traffic in urban and suburban areas, aiming at improving the cohabitation of pedestrians and vehicles.

Proposal: 2/1/11

Develop policies to increase awareness of the problems of the more vulnerable pedestrians (young children and elderly).

Proposal: 2/1/12

Disseminate the idea that road safety is a human right and incite governments, administrations, industry etc. to invest in road safety as a productive investment (cost-benefits).

2.2 Vehicles

Technical developments concerning the

pro-tection of vehicle occupants, the quality of tires, roadholding, lighting, have contri-buted towards making vehicles safer. But the delays in putting into effect these technical advances are long for technical, economic and legal reasons. It must also be feared that the im-provement in safety obtained by these technical developments is partly offset by the continued development in the performance of vehicles (widening gap between possible and legal maximum speed). In this context, the efforts to adapt vehicles to the requirements of improved road safety must be continued.

In addition legal measures concerning the technical characteristics of these vehicles can be proposed.

Cyclists, particularly the young between 15 and 24, are involved in accidents for which we often do not have sufficient statistics to act with a complete understanding of the ac-cident causes. Nevertheless, it would appear desirable to improve their visibility.

Heavy vehicle fleet operators must take into account the need for qualified personnel. Also the design of heavy vehicles must incorporate and develop safety. Especially because of their weight and performance, accidents involving heavy vehicles are particularly serious.

Proposal: 2/2/2

Progressive development of the periodic tech-nical inspection of vehicles and safety inspec-tion of vehicles by the police, on the road.

Proposal: 2/2/1

Limit by the construction all the maximum speed of vehicles to a level consistent with the legal maximum speed limits.

Proposal: 2/2/3

General implementation on all types of ve-hicles of active and passive safety equip-ment (belts for all occupants, equipment adapted for children, airbag) . It is desirable that the braking of a vehicle could be per-ceived earlier and from further away by those fol-lowing it.

Proposal: 2/2/4

Fit all cars with a third stop light placed in a high position.

Proposal: 2/2/5

Encourage research aimed at better inte-grating active and passive safety into vehicles at the design stage.

Proposal: 2/2/6

Reduce by construction the maximum speed of heavy vehicles to a level below that of cars, by equipping them with tamper proof speed governors.

Proposal: 2/2/7

Develop road safety programmes for transport companies and improve the initial training of professional drivers for technical and behavioural knowledge.

Proposal: 2/2/8

Improve the passive and active safety of heavy vehicles (fitting of seat belts, lateral protection, antitrap bars, improved driver visibility, night signals...).

Proposal: 2/2/9

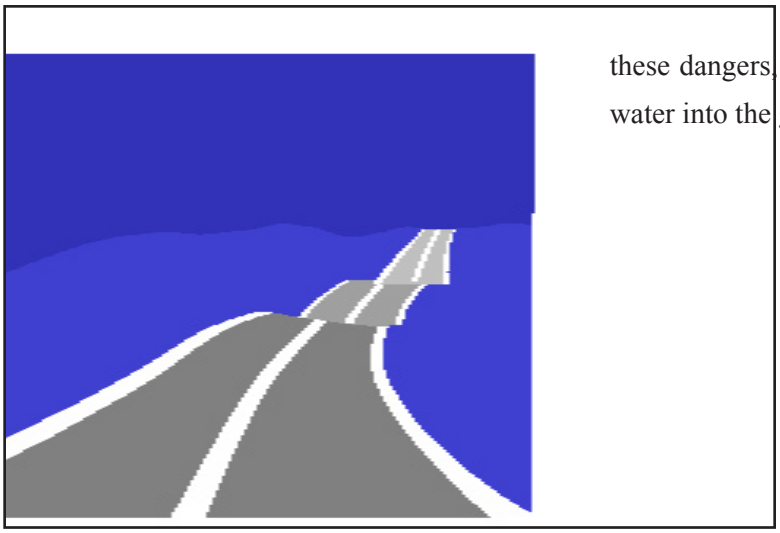
Increase the safety of two-wheeled vehicles (suppression of contusive forms, maximum speed limited by construction...) and restrict the possibilities for modification of the vehi-cles.

Proposal: 2/2/10

Improve the visibility of cyclists by equipping bicycles with adequate reflectors and recommending that cyclists wear clothing with retro-reflective bands. Make the wearing of crash helmets compulsory for cyclists.

Proposal: 2/2/11

Gather the statistics necessary to determine the factors for accidents in which cyclists are involved, in order to carry out appro-priate preventive measures.



these dangers, but also an im-proved flow of water into the ground.

2.3 Road Network

The development of the road network is one of the most effective and long lasting actions to improve safety, because with technical measures it influences the behaviour of road users and can contribute to a reduction in the frequen-cy and gravity of accidents. In this spirit, safety should be integrated into all road infrastructure projects. This applies equally to the improvement of road accident black spots.

The actions to be undertaken to ensure that the road network offers the best possible degree of safety are in some cases common to all roadways, in others specific to the function of the role within the road network.

The continents of the world require that international connecting routes will be taken into account.

Electronic information and guiding devices designed to inform drivers are not really effective unless they are easily understood by road users.

Roadways become more dangerous by rain because of the reduced visibility due to spray, the risk of aquaplaning, and the reduced grip on a wet surface. The implementation of draining road surfaces not only allows the reduction of these dangers, but also an improved flow of water into the ground.

Particular attention should also be paid to the sides of the road where improvements can considerably reduce the gravity of accidents.

The development and creation of the road network must take into account certain requirements, demonstrated by studies and works carried out in different countries.

It would be desirable to set up checks of the quality of road networks, to establish standards for the organization of traffic and to organise training for the personnel responsible for the development and running of roads.

Proposal: 2/3/1

Develop road infrastructure to guarantee transport quality by acting notably on the time for travelling, comfort, safety, the legibility of itineraries, cost, information etc.

Proposal: 2/3/2

Consider the social and economic losses caused by traffic accidents in cost effectiveness studies concerning investments in the

studies of traffic, site and adequate lighting according to guidelines set up to this end.

Proposal: 2/3/6

Study the feasibility of roundabouts which would possibly replace crossings.

Proposal: 2/3/7

Create hierarchical road networks which are categorized and have defined technical norms.

Proposal: 2/3/8

Classify roads into four categories: motor-ways, interurban roads, main roads and

ordinary roads, and respect the technical criteria for each category, in conformity with the „European Agreement on Routes with International Traffic" (AGR, E Routes) produced under the auspices of the Economic Commission for Europe of the UNO.

Proposal: 2/3/9

Think of roads in terms of their continental continuity.

Proposal: 2/3/10

Generalize and standardize the use of electronics for road traffic information at a social cost.

Proposal: 2/3/11

Standardize the signalling, road markings and road equipment, always improving the legibility of the fixtures and devices whilst reducing the number of road panels.

Proposal: 2/3/12

Homogeneous lighting of the road network.

Proposal: 2/3/13

Give drivers the best possible opportunities for avoidance and recovery of control of their vehicles. Make lateral obstacles less dangerous.

Proposal: 2/3/14

Assure the programming, the design, the protection and the signalling of maintenance and construction sites in order to ensure the safety of the road users and of the site personnel, taking the maximum possible account of the safety of the drivers and of their diversions.

Proposal: 2/3/15

Develop the use of draining anti-skid surfaces.

Proposal: 2/3/16

Abolish as quickly as possible three-lane roads and those which can be perceived as motorways without having the characteristics of motorways, and therefore encouraging a type of driving for which they are not appropriate (crossings with local roads, intersections at the same level etc...).

Proposal: 2/3/17

Clarify at an international level the principles of a hierarchical urban road system.

Proposal: 2/3/18

Put into effect technical developments for roadways which encourage more relaxed driving and greater courtesy between road users for passing through built-up areas for example.

Take road safety into account in the development of regions and in town planning.

Proposal: 2/3/20

Have technical audits made by experts independent of the road network management in the framework of the road safety assessment of the roads itineraries:

- *checks of the signalling and its coherence*
- *correction of the levels at the edge of the roadway and strengthening of the sides of the road*
- *systematic positioning of safety barriers along sections of roadways bordered by trees or other fixed obstacles, known as accident black spots.*

Proposal: 2/3/21

Establish traffic plans combining rules, principles and recommendations which:

- *consider the quality of life of the inhabi-tants, the safety of all road users and environmental problems*
- *systematically provide special facilities for the handicapped.*

Proposal: 2/3/22

Provide road safety training to road maintenance agents.

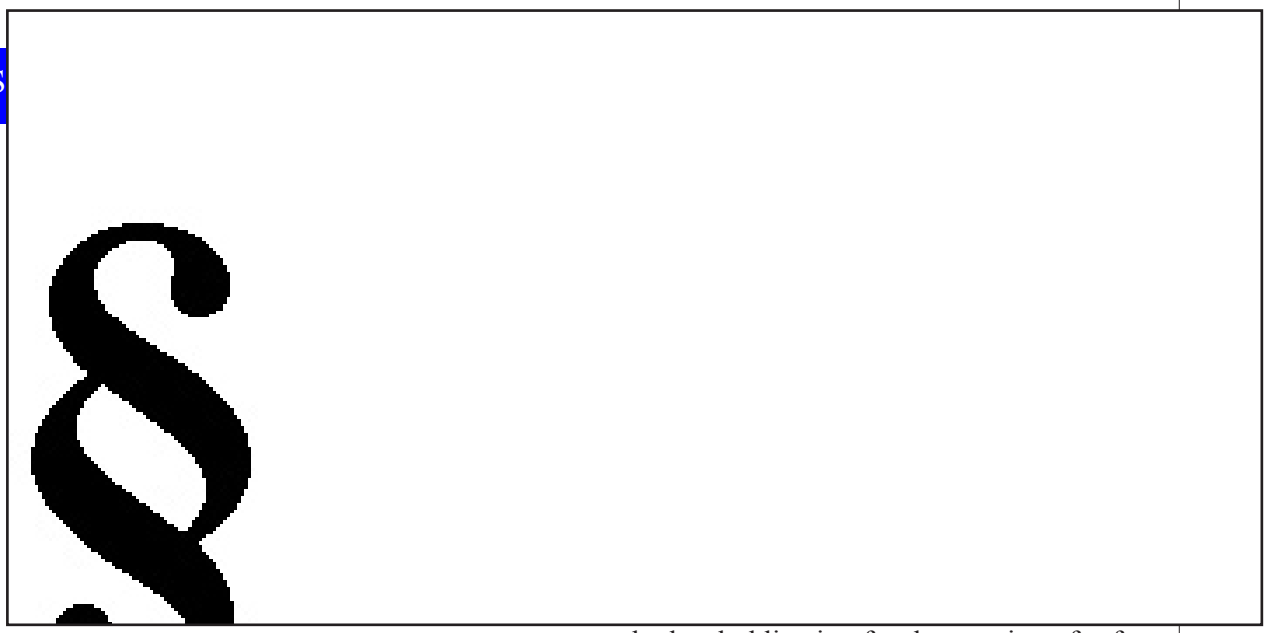
Proposal: 2/3/23

Improve the visibility of pedestrians by the use of retro-reflective material and by appropriate street lighting, mainly at pedestrian crossings.

2.4 Legislation and Traffic Regulations

The harmonization of road regulations and signalling in the different countries of Europe is a favorable factor for security in that the risk of accidents arising from difficulties in adaption are considerably reduced.

It would be desirable to go beyond this in creating at the international level a behaviour guide, which would not be limited to recom-mending respect for the rules of the highway code.



the legal obligation for the wearing of safety belts and the frequency and effectiveness of controls.

For the users of two-wheeled vehicles the wearing of a crash helmet has a role comparable to that of the safety belt for the occupants of automobiles: it significantly reduces the seriousness of accidents.

The correlation between the level of alcohol consumed and the risk of an accident has been established unambiguosly by numerous studies.

The surveillance of the road network must be carried out with a concern for both dissuasion and effectiveness. It will be dissuasive when the road user attributes a high probability to an infraction being detected. It will be even more credible and hence effective if the infractions detected really do correspond to dangerous behaviour. To fulfill these conditions, it would seem to be indispensable that such surveillance is entrusted to a sufficient

All experience has proved that speed is the number one factor in road accidents; its control therefore has a particular importance for the safety of road users and also for the cost, direct and indirect, of accidents, and for the whole of society. In addition, this control could contribute to the general economising of energy and the reduction of pollution.

Retaining systems - safety belts for adults and older children, appropriate means for babies and young children - in the case of a shock

is entrusted to a sufficient number of people who have received a specific training for the task.

The legal maximum driving hours are not always respected by road transporters. The result is too many accidents linked to fatigue and lack of sleep.

Because of the number of drivers with an excessive level of alcohol, the development of campaigns to reduce the number of drink drivers is a priority measure to improve road safety.

Also, because of the changes in capability of certain elderly drivers which could cause traffic accidents, it is necessary to periodically check theirs ability to drive.

Proposal: 2/4/1

Prepare a guide to driving behaviour at an international level with practical indica-tions of the behaviour to adopt in various driving situations.

Proposal: 2/4/2

Investigate the reduction of driving speed by:

- *regulating speed as a function of the infrastructure and the environment (type of road network, built-up area, weather conditions...)*
- *encouraging the authorities of each coun-try to find the means of verifying the re-spect of speed limits...*
- *making road users aware of the necessity for this respect, and also for the need to adapt speed according to the circum-stances and to take into account various factors: organization of journeys, ener-gy, noise etc....*

Proposal: 2/4/3

Progressively obtain the use of retaining systems by all users of four- or more- wheeled vehicles. For this:

- *first make sure that all seats in the vehicle are provided with a safety belt*
- *progressively extend the protection offered by retaining devices to children and to occupants of commercial vehicles and buses.*

Proposal: 2/4/4

Make the wearing of crash helmets compulsory for all users (rider and passenger) of all categories of motorised two-wheeled vehicles.

Proposal: 2/4/5

Make the wearing of quality-proof crash helmets compulsory for cyclists.

Proposal: 2/4/6

Recommend a maximum blood alcohol content of 0.5g/l.

Proposal: 2/4/7

Prohibit driving under the influence of drugs and certain medicines.

Proposal: 2/4/8

Medical doctors and chemists should be asked to draw the attention of users of certain products to the risks they will run when driving.

Proposal: 2/4/9

Propose that the boxes of medicines liable to cause behavioural difficulties should be marked with a distinctive sign, a red triangle for example, as is the case in Scandinavia.

Proposal: 2/4/10

Make lit headlamps during daytime compulsory for motorised two-wheeled and four- wheeled vehicles and consider this for four- or more-wheeled vehicles as a measure to be proposed for northern countries and for certain climatic conditions.

Proposal: 2/4/11

General prohibition to use a portable telephone when driving a vehicle.

Proposal: 2/4/12

Devote sufficient means - in numbers and methods of efficient control to road surveillance which must be considered as a priority and carried out by specialised personnel having received a specific training in road safety.

Proposal: 2/4/13

Improve enforcement especially between midnight and the early morning.

Proposal: 2/4/14

Enforce better respect of the laws concerning driving hours.

Proposal: 2/4/15

Recommend that national legislation should, if necessary, be adapted to allow random checks of road users regarding their alcohol

level by the authorities re-sponsible for surveillance.

2.5 Penalties

Because of the diversity of repressive policies between countries and their lack of coordination concerning road-related offences, drivers who commit offences outside their own country benefit from a relative impunity.

Sanctions are a necessity which are better understood and more effective if they are combined with an element of education aiming at an in-depth modification of the attitudes and behaviour of road users. In this spirit various measures have been taken in several countries.

The points system for driving licenses has a number of advantages:

- It reinforces the concept that a driving license is an administrative authorization, whose continuation depends on the behaviour of its holder. It therefore emphasises the responsibilities of the driver.
- It particularly penalises drivers who continue to commit offences.
- It is educational if it provides for the recuperation of points by appropriate training. Thus the points system encourages the development of a continuing training for drivers.

Proposal: 2/5/1

Design procedures allowing the prosecution of offences committed by drivers outside their national territory

Proposal: 2/5/2

Compare the practices in different countries concerning alternatives to judicial prosecutions, penalties of substitution or accompaniment, as well as the measures taken to influence attitudes of drivers towards legislation and the risks of road traffic.

Proposal: 2/5/3

Explain and encourage the principle of a points system for driving licenses.

Proposal: 2/5/4

Take advantage of the points system license to set up continuous training of drivers, mainly aimed at those who commit offences.

2.6 Organization of Aid to the Injured

The seriousness of many accidents could be reduced if those present took effective action, on the one hand by preventing the first accident causing a second, and also by giving correct first aid to the injured.

Experience shows that the rapidity in giving the alarm determines the speed at which first aid arrives.

The emergency services of diverse public and private organizations are not always well coordinated. This can result in delays in the arrival of first aid.

Certain regions with a relative low population density are under-equipped with emergency services. Unacceptable delays in intervention can result.

The help for the reintegration of accident victims whose close relatives may have died in the accident, or who suffer serious handicaps because of the accident, appears insufficient.

Proposal: 2/6/1

Provide elementary first aid training in parallel with driver training.

Proposal: 2/6/2

Proposal: 2/6/3

Eventually offer a single emergency tele-phone number at international level.

Extend the possibility of no-charge emergency calls from public telephones.

Proposal: 2/6/4

Develop emergency call networks on major inter-urban roads.

Proposal: 2/6/5

Coordinate all services which can take action.

Proposal: 2/6/6

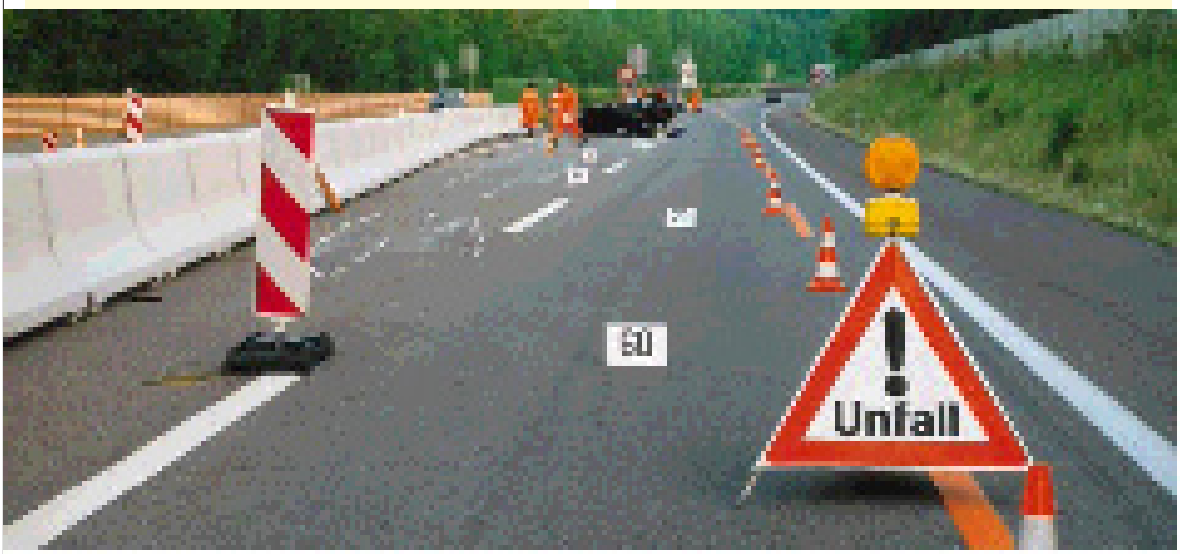
Within each country set quantified targets for accident site response times from the emergency services. These emergency services must be led by competent person-nel equipped with material allowing the administration of first aid during the transport of the victim.

Proposal: 2/6/7

Improve the information available to accident victims and their relatives concerning the possibilities of social, professional and educational reintegration.

Proposal: 2/6/8

Coordinate and facilitate the steps to be taken by accident victims with the appropriate administrations after hospitalisation.



2.7 Safeguarding of the Environment and the Quality of Life in Transport Policies

Road traffic is an important contributor to atmospheric pollution because of the exhaust fumes containing toxic gases.

The development of goods transport by road has led to an increase in pollution from exhaust emissions and from nuisance, particularly noise. The current rail infrastructure does not allow the development of combined road/rail transport in a satisfactory manner. In addition, the cost of rail transport does not appear to be sufficiently competitive to the transporters.

The excessive development of urban automobile traffic is an unfavourable factor for the quality of life in large urban areas. Many and varied initiatives have been taken in large towns to reduce the emissions associated with the proliferation of private cars.

The improvement in the information for road users concerning the flow of traffic on various routes they are approaching can reduce accidents and traffic jams.

Proposal: 2/7/1

Improve on the one hand the technical methods of propulsion so as to reduce or suppress the consumption of fuel whose combustion produces toxic gases, and on the other hand the methods for treating the exhaust before its emission.

Proposal: 2/7/2

Convert the taxation of automobiles according to cylinder volume towards a tax based on fuel consumption,with the aim of reducing exhaust emissions.

Proposal: 2/7/3

Encourage drivers to adopt driving habits which conserve fuel, tyres, suspension...

Proposal: 2/7/4

Promote the economic competitiveness of rail transport of goods,which ge-nerally has to support a large part of its infrastructure costs.

Proposal: 2/7/5

Reduce the mileage of empty heavy goods vehicles (about 30% in Germany) by developing merchandise distribution centers and combined supply traffic. centers and combined supply traffic.

Proposal: 2/7/6

Develop subsidies for short-distance public transport firms to achieve a vo-lun-tary reduction in private car traffic. Improve the quality and periodicity of short-distance public transport.

Proposal: 2/7/7

town, rather than car parks in the town center.

Proposal: 2/7/8

Encourage cycle traffic by the development of cycle tracks and lanes, as well as by limiting the speed of cars in streets where there is a dense pedestrian and cycle traffic; this limitation can be obtained by a suitable arrangement of the road infrastructure.

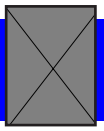
Proposal: 2/7/9

Improve the traffic flow by introducing automatic information panels, in particular on busy motorways.

Proposal: 2/7/10

Improve direction signalling systems within built-up areas.

MEASURES INTENDED TO HELP DEVELOPING COUNTRIES



3.1 Introduction

It is generally recognised that developing countries very often have a higher level of road accident victims compared to industrialised countries. The latter have tried, in the context of the increasing number of vehicles, to at least partially overcome the evils of motorised civilization.

This situation raises the question of the possibilities and conditions for a transfer of experience to the different regions of the globe.

The developing countries present certain analogies with regards to their apprehension for the social space which roads represent. Thus, considering the other problems with which they are confronted, often the authorities of these countries can only pay a secondary attention to road accidents, the cost of which are not always measurable.

But it seems illusory to propose possible actions without taking into account the perception of the roads and vehicles belonging to each country and each culture; all aproaches aiming at better managing the social aspects on roads must first take into account the national and local factors.

With regard to climate, relief, the ways and customs, each developing country constitutes an individual case within three geographical zones.

Besides the importance of the problems of infrastructure and the particularities of the climate, the mental representation of the nationals of African countries are very dif-ferent from those that are known in Europe - such as the representation of the body and death in particular.

The dimension of magic, of the marvellous present in daily life, must be taken into account or else the road safety message will not be taken in by the general population. On this subject, and taking account of their role in authorities, particularly women's societies should be considered as potential partners and means of contact.

3.2 Staff Training

Nothing is possible in accident prevention without first having local staff aware of and trained for the problems of road safety.

Proposal: 3/2/1

Training courses for road safety could be organised:

- *either on the spot with the assistance of national experts and associations*
- *or in industrial countries; in the framework of agreements between organizations for road safety and research institutes.*

Different approaches can be imagined for driver training; but its quality will mainly depend on the progression of the training and the quality of the instructors.

Road safety is a social problem which can-con-cerned by the human and economic con-not be approached without the involvement se-quences of road accidents. These pressure of associations or pressure groups who feel groups can improve the awareness of the media to road safety.

3.3 Changing Behaviour

The definition of educational and informative actions to be taken requires a deep knowledge of the local situation.
process; with this in mind the school should The fundamental attitudes towards cars and have the responsibility and duty to provide risk are established very early in the education clear teaching in this area.

Proposal: 3/3/1

Design tools adapted not only to the specifics of the local situation but also to the state of literacy in the country concerned.

Proposal: 3/3/2

Design road safety education programmes and prepare a certain number of tools (teaching books, posters...) with the input of teachers, who would also receive training in the use of these tools.

Proposal: 3/3/3

Organise training courses for instructors.

Proposal: 3/3/4

Design regular information campaigns on speeding, drinking and driving relying on associations and pressure groups to help with the diffusion of the message. En-courage the creation of organizations or associations able to improve the contact with the population.

3.4 Regulations

Rules adapted to the ethno-sociological circumstances, clear and accepted, are a determining factor in road safety.

Proposal: 3/4/1

Make legislative efforts on the major themes of speed limits, wearing of seat belts and drinking and driving.

3.5 Improving Road Networks

The development of well-designed road networks can play a very important role in the improvement of road safety; in this respect it is above all important that the roads are set up in relation to the importance and the nature of the traffic and the use of these routes.

It will not be credible to ask from road users efforts in moderating their behaviour without simultaneously offering a more understandable and safer environment.

Proposal: 3/5/1

The road networks should have a hier-ar-chical structure in accordance with their role.

Proposal: 3/5/2

Improve the legibility of signs and, in certain cases, put in place signals which are immediately perceptible to road users.

Proposal: 3/5/3

Proceed towards the progressive achievement of simple road improvements such as roundabouts, the suppression of lateral ob-stacles, road humps for limiting speed in areas frequented by pedestrians and chil-dren.

Proposal: 3/5/4

Take into account the safety of road users in all maintenance projects and work on the road infrastructure.

3.6 Developing or Establishing Help for Road Accident Victims

Limiting the seriousness of the consequences of an accident which could not be avoided constitutes an objective of all road safety policy.

Proposal: 3/6/1

In the context of international cooperation, foresee the use of military and medical means to help set up first aid.

3.7 Evaluating the Effects of Measures Taken

Although it is difficult to attribute to a certain measure the contribution it has made to the reduction in accidents, it is important, for estimating the cost-effectiveness and also for psychological reasons, to evaluate the effects of each measure with the greatest possible pre-cision.

Proposal: 3/7/1

Set up an evaluation system when various road safety measures are put into effect.

3.8 Methodology of the Approaches to be Made

The definition of the actions to be taken in a developing country requires preparatory work analysing the situation (climate, economy, administrative structures...), the gathering of information on the road traffic, the vehicle park, the road network, accidents...

Proposal: 3/8/1

Before defining a plan of action for road safety, carry out an in-depth study of the existing situation in the country concerned.

3.9 The Means

All study, all action for safety, requires financing, which cannot necessarily be provided by the member organizations of PRI.

Proposal: 3/9/1

Search for financial means through partnerships or funding organizations.

3.10 Establishing Partnership Projects

The national or international organizations able to contribute their know-how and/or financial support can only make a decision based on a dossier clearly stating the objectives, the identi-fication of those involved, the project develop-ment and the type of partnership foreseen.

Proposal: 3/10/1

Establish partnership projects committing the parties concerned and submit these to organizations that might be able to provide the financial backing.

MONITORING THE EFFECTIVENESS OF PREVENTIVE

Although it is always difficult to evaluate the effectiveness of one road safety measure among the others, it is necessary to define, at the same time as the action is undertaken, criteria which allow at least an approximate estimation of their effectiveness.

Proposal: 4/1

Creation of a data bank to communicate traffic safety campaigns and actions with indication of methods and results to all interested parties.

Proposal: 4/2

Evaluate the effectiveness of the measures taken to promote road safety.