



SAMFERDSELSDEPARTEMENTET

*Ministry of Transport and Communications*

English summary

# Road Safety in Norway Strategy 2002–2011





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## CONTENTS

BACKGROUND .....	4
1. INTRODUCTION .....	5
2. ACCIDENT TRENDS AND CAUSES .....	8
2.1 Accident trends.....	8
2.2 Accident causes and measures .....	13
3. COOPERATION AND COORDINATION IN ROAD SAFETY WORK .....	14
3.1 The Joint Road Safety Committee .....	14
3.2 The National Road Safety Forum .....	14
3.3 Cooperation between various levels of government administration .....	15
3.4 Non-Governmental organisations.....	15
3.5 The commercial sector .....	15
4. ROAD NETWORK MEASURES.....	16
5. MEASURES AIMED AT REGULATING BEHAVIOUR .....	18
5.1 Penalty point driving licence endorsements .....	18
5.2 Speed limits .....	19
5.3 Blood alcohol content of 0.2 per thousand .....	21
5.4 Other intoxicants than alcohol.....	21
5.5 Use of electronic equipment in motor vehicles - hand-held mobile telephones .....	22
6. MEASURES RELATING TO MOTOR VEHICLES .....	23
7. ENFORCEMENT .....	24
7.1 Surveillance.....	24
7.2 Shared responsibility for monitoring .....	26
8. TRAFFIC TRAINING AND INFORMATION .....	27
8.1 Traffic education in schools .....	27
8.2 Training of drivers.....	28
8.3 Information by the Public Roads Administration .....	31
9. BUILDING OF KNOWLEDGE .....	33
9.1 International exchanges of information.....	33
9.2 Research and development .....	33
9.3 Road network analysis .....	34
9.4 Accident analysis groups .....	34

## BACKGROUND

The Ministry of Transport and Communications presented the transport policy document *National Transport Plan 2002-2011* to the Norwegian Parliament on 29 September 2000. The plan was adopted by the Parliament on 15 February 2001. The policy document includes all transport sectors, and special attention is given to road safety. The Ministry of Transport and Communications chose to in parallel with the presentation of the policy document to highlight the area of road safety through the road safety plan *Road Safety Strategy 2002-2011*.

This English summary of the *Road Safety Strategy 2002-2011* takes into account divergent views of the Parliament (in the period 1997-2001) and the Government in office in the area of road safety. The summary also includes necessary updates; e.g. dates onto which regulations enter into force.

September 2002

*“A vision of no road fatalities or road accidents causing lifelong injury is set out for the long-term road safety effort”*

## 1. INTRODUCTION

A transport system that functions well is a necessity in a modern society, and especially in a sparsely populated country like Norway. It is important to develop a balanced transport policy that includes all modes of transport.

A major Government objective is to improve road safety. Safety is an important responsibility for anyone involved in transport, whatever mode. The greatest challenge, however, lies in reducing person injuries. The number of lives lost in road traffic annually equals the number of fatalities that occur during 15 years within the other transport sectors altogether. More than 300 people lose their lives in road accidents every year in Norway, and more than 12,000 people are severely injured.

Various bodies both locally and centrally are already making considerable efforts to reduce the number of accidents with severe injuries. As a result of targeted road safety work, the number of road fatalities has since 1970 been reduced with almost half, and the number of people getting dangerously or seriously injured with about two thirds. Nevertheless, some 12,000 people are still killed or injured annually in road accidents in Norway, of whom more than 300 lose their lives and about 1,400 are seriously injured.

The Government regards the extent of the casualties on Norwegian roads as a serious problem to society. Thus motivating the long-term road safety effort, which sets out the vision of no accidents, no deaths or injuries.

The vision is intended to be a common basis for road safety efforts among all the stakeholders: Government, local authorities, police, various organisations, and especially the road users. In transport there is always a risk of accidents occurring, but it is important to prevent the severe injuries from happening.



Photo: Knut Fjeldstad/Samfoto

### **BOX 1.1 ROAD SAFETY TARGET SECTORS**

A significant reduction in the number of people killed or injured calls for a wide range of road safety measures.

For the 2002 to 2011 period, the Government is pinpointing the following target areas for improved road safety:

- Improving the coordination of road safety work
- Safer roads
  - Road construction
  - Removal of roadside hazards
  - Improving curves
  - Rumbled centre lines
  - Road lighting
  - Providing safe crossings for pedestrians and cyclists
  - Road safety audits of road plans and existing roads
  - Improved winter operations
  - Better maintenance.
- Measures to regulate behaviour
  - Speed limits regulation
  - Ban the use of hand-held mobile phones while driving
  - Maximum blood alcohol of 0.2 per thousand
  - Penalty point endorsements of driving licences.
- Enforcement
  - Increased roadside technical checks of heavy vehicles
  - Increased checks on the use of safety equipment (including seat belts)
  - Automatic speed control.
- Emphasis on police surveillance, such as control of speeding and driving under the influence of alcohol/drugs
- Improved traffic education and information
  - Better training for drivers
  - Compulsory courses/sessions before starting the driving practice (category B)
  - Compulsory tests at driving schools before taking the driving test
  - Compulsory first aid training
  - Further development of motorcycle instruction.
- Emphasis on knowledge-building
  - Accident analysis groups
  - Road safety research
  - Accident analysis of the road network.

The target areas for enhanced road safety in the 2002 to 2011 period, presented in box 1.1, are accounted for in sections 3-9. The Public Roads Administration has together with other principal bodies prepared a separate action plan for road safety, in which the road safety measures presented in this road safety strategy document is described in greater detail.

The Ministry of Transport and Communications realises that although working towards enhanced road safety there will after the 2002 to 2011 period remain major challenges in improving road safety. Thus we are also dependent upon contribution from other stakeholders in our road safety efforts, not least to achieve the full effect of the measures put forward for the 2002 to 2011 period.



Photo: Knut Fjeldstad/Samfoto

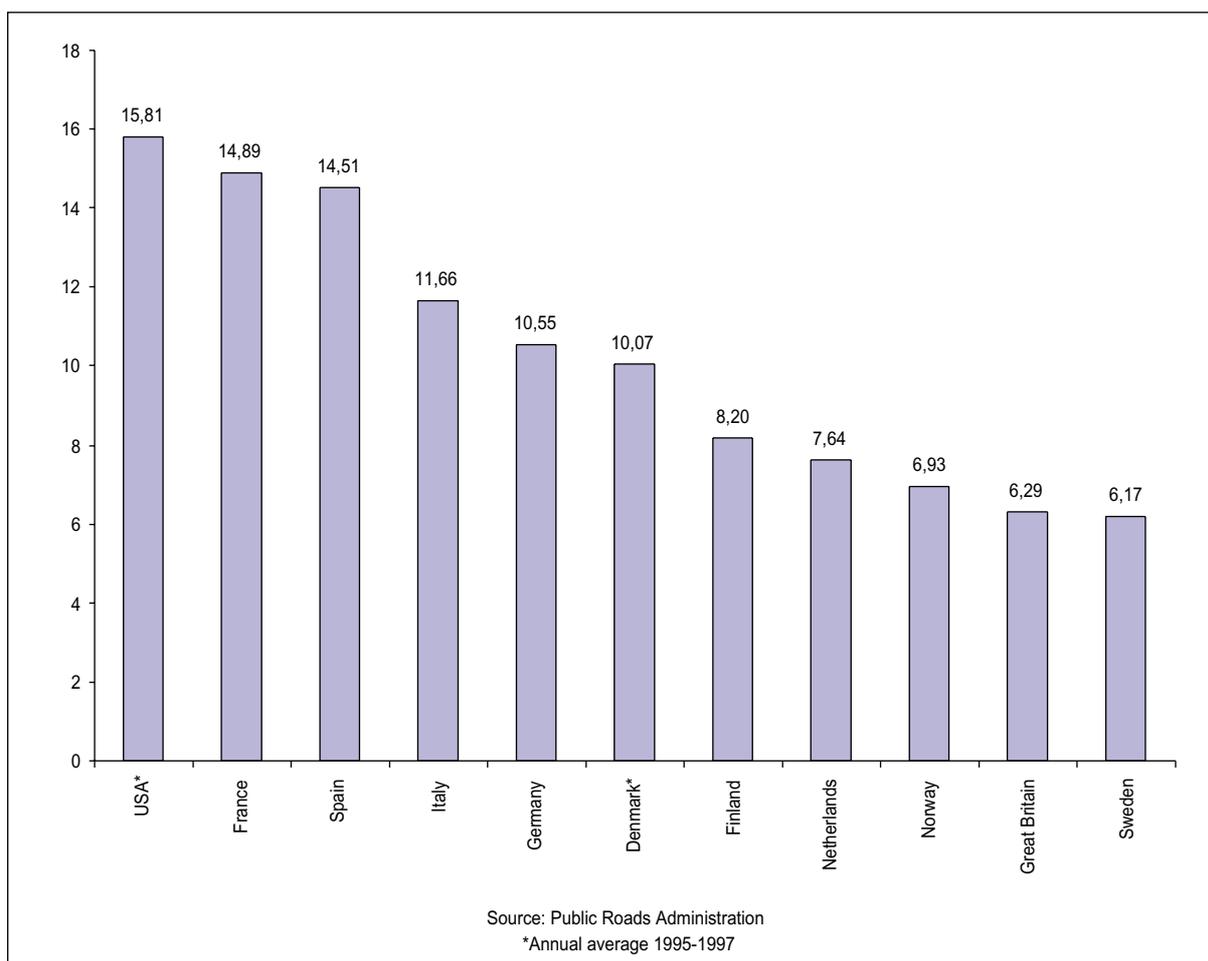
## 2. ACCIDENT TRENDS AND CAUSES

### 2.1 Accident trends

In Norway, as in a number of other European countries, there has been a distinct improvement in road safety over time. The road accident toll nevertheless presents a joint challenge to European countries. For example, about 43,000 lives are lost annually in road traffic in the EEA region, and about 1.7 million people are injured, not taking into account the lack of reporting of such injuries. The challenge has been placed on the agenda by means among other things of *Promoting Road Safety in the EU – the Programme for 1997-2001*, and the follow-up to the programme in the Council Resolution of June 2000, the Swedish *Zero Vision*, and Norway's *Road Safety Strategy 2002 - 2011*.

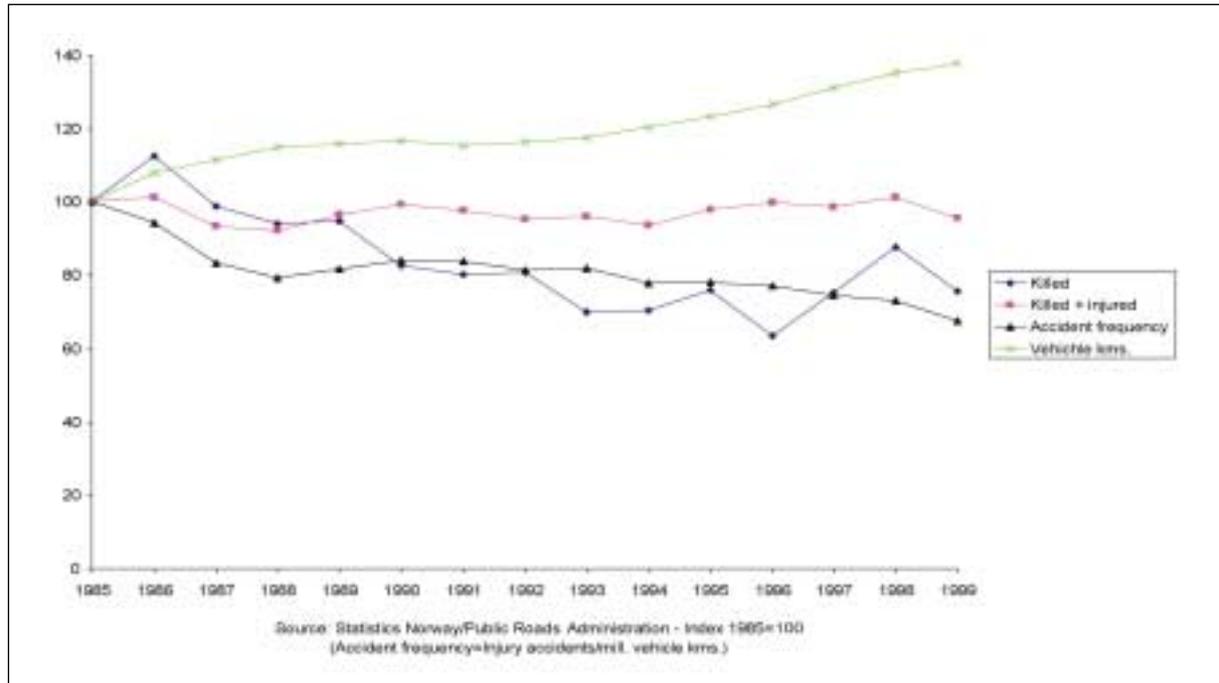
Norway has a high standard of road safety, cf. international comparisons in figure 2.1.1.

**Figure 2.1.1 International comparison. Number of people killed per 100,000 inhabitants – Annual average 1995-1998**



The number of road casualties reported to the police in Norway has remained relatively stable at about 12,000 per year. Traffic has increased, however, leading to a decline in the accident rate. There has been a considerable drop in the number of fatalities over time. This has, however, not been the case during the last few years. The number of fatalities also shows large fluctuations from year to year, cf. figure 2.1.2.

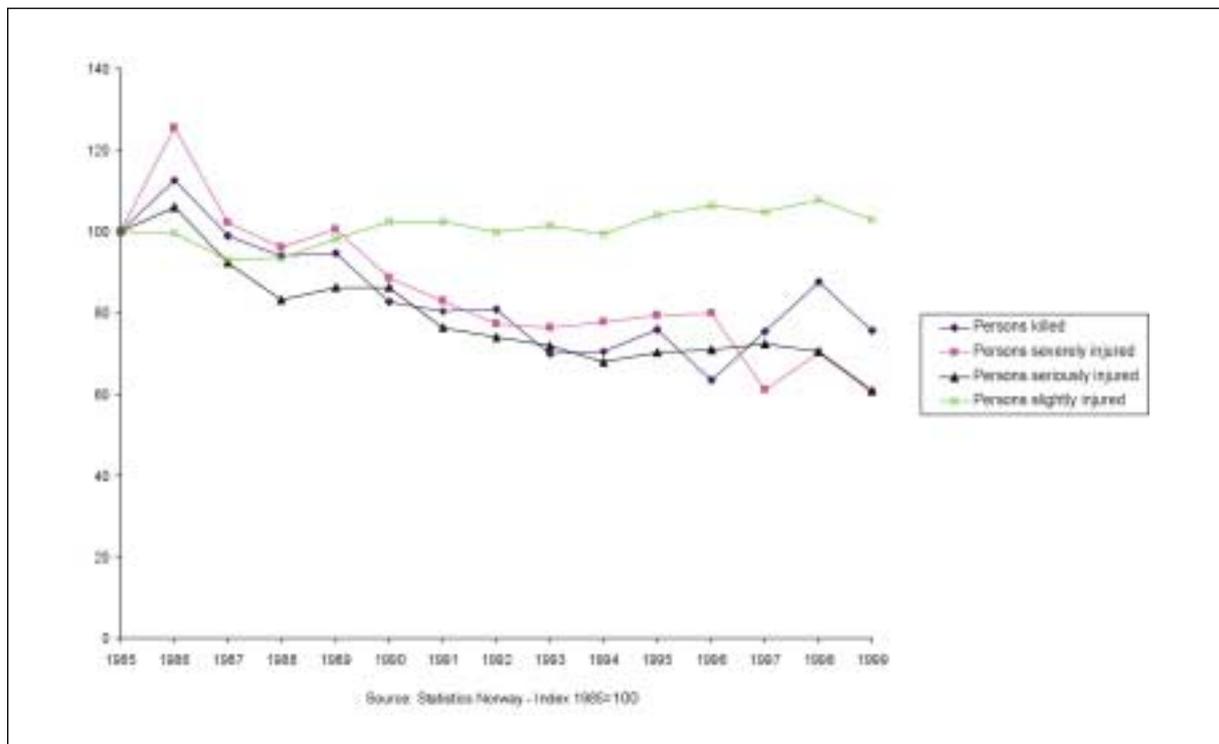
**Figure 2.1.2 Accidents trend**



Only an estimated one third of all accidents where people are injured are reported to the police. The lack of reporting is highest when no motor vehicle is involved and the injuries are not severe.

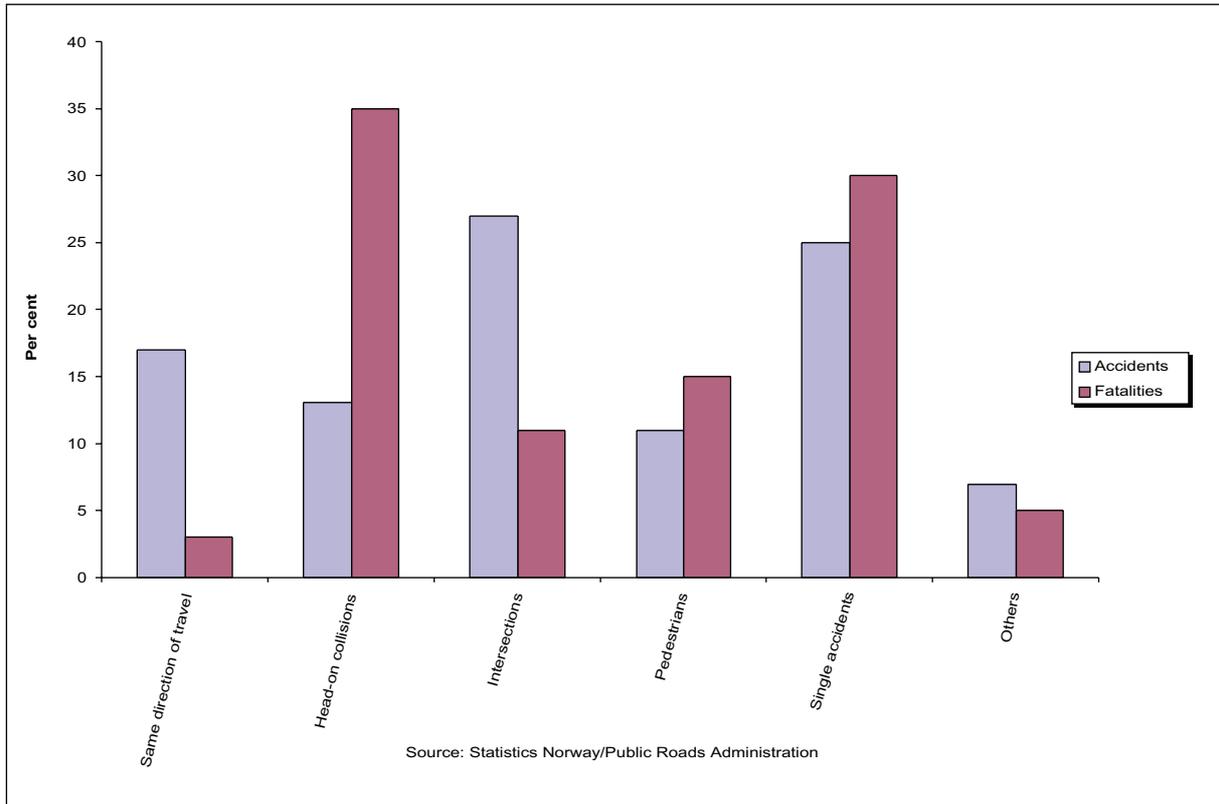
As far as the severity of injuries is concerned, the numbers of severely and serious injuries in official accident statistics have fallen over time, but this is not the case in the last few years, cf. figure 2.1.3.

**Figure 2.1.3 Accident severity trends**



Head-on collisions cause by far the highest number of fatalities per accident. Single accidents and accidents involving pedestrians also exceed the average number of people killed per accident. Altogether, head-on collisions and single accidents account for roughly two thirds of all road fatalities, cf. figure 2.1.4.

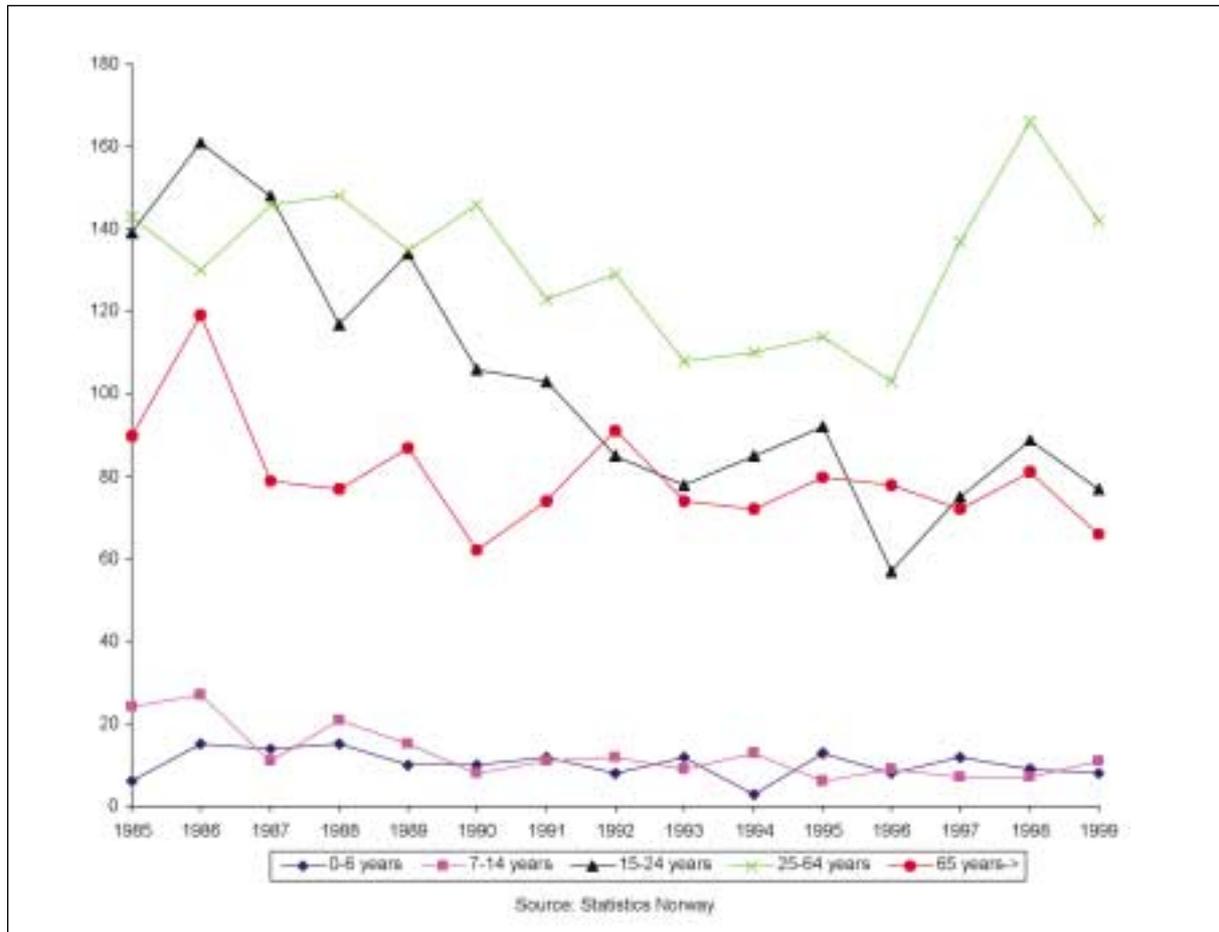
**Figure 2.1.4 Accidents and fatalities by type of accident – Annual average 1995-1998**



The number of accidents and fatalities divided on the different types of accidents shows little variation over time.

In the two youngest age groups numbers of fatalities are low and they show little variation over time. In the age group 15 to 24 years we observe a decline in the number of fatalities, cf. figure 2.1.5.

**Figure 2.1.5 Number of fatalities by age groups**



## 2.2 Accident causes and safety measures

The Foundation for Scientific and Industrial Research at the Norwegian Institute of Technology (SINTEF) has carried out an in-depth analysis of head-on collisions and single accidents resulting in deaths or severe injuries on straight road sections with 80 or 90 kph speed limits (report no. STF22 A99559). The report only considers a limited number of accidents, but presents a number of different causes that contributed directly or indirectly to the accidents. The report points at tiredness as the most contributing factor. Sudden illness, suicide and intoxication are also among the important explanatory factors. In general, the report describes road conditions as indirect contributory causes.

The SINTEF report only analyses certain types of accidents. Nevertheless, it illustrates that road accidents have a number of different causes. In the opinion of the Ministry of Transport and Communications, this is reflected in the fact that there are few single measures which, adopted in isolation, can bring about a significant reduction in the number of casualties, cf. box 2.2.1.

### **BOX 2.2.1 THE POTENTIAL OF MEASURES TO REDUCE THE NUMBERS OF PERSONS INJURED OR KILLED**

In Report no. 446/1999 by the Institute of Transport Economics, Improved road safety in Norway, a large number of road safety measures are studied. Their potential improvement on road safety, their cost-effectiveness, and their cost-benefit were defined. The following is among the report's conclusions:

"The greatest opportunities in reducing the numbers of persons killed or injured in traffic are related to increased police surveillance and sanctions for violations of traffic rules, stricter safety requirements for vehicles, and new traffic regulations, in particular lower speed limits. In the longer term, there is also a considerable potential for improved road safety in better road design and construction and better road equipment. Better operation and maintenance of the road network and training and information measures have a lower potential for improving road safety. In every area, a variety of measures contribute to improved road safety. There is no single measure capable of significantly reducing the numbers of persons killed or injured when used alone."

Measures aimed at reducing the number of casualties may have undesired effects where other transport considerations are concerned. Thus, it is important to establish priorities among road safety measures with due regard to overall transport policy.

### 3. COOPERATION AND COORDINATION IN ROAD SAFETY WORK

The national road authorities have a number of instruments at their disposal to reduce the number of accidents and their severity. Other national and local bodies also play an important part in improving road safety. The Ministry of Transport and Communications regards it as important to integrate road safety considerations at all levels, both in overall planning and in the work on particular measures.

Nationally, the police devote considerable resources to improve road safety. The Ministry of Education and Research, schools, and the National Society for Road Safety are doing important educational and training work. In addition to their responsibility for treating and assisting those injured when accidents occur, the Ministry of Health and the health sector have important functions in the promotion and the coordination between sectors of accident and injury prevention work and measures aimed at reducing harmful effects.

For a most efficient use of the available resources, it is important for the parties to be able to draw on each other's qualifications and experience. Formal and informal cooperation of this kind already takes place in numerous contexts. National government authorities are not the only bodies that need to attach importance to coordination and joint planning. It is important that municipalities and counties also ensure a coordinated and effective road safety effort.

#### **3.1 The Joint Road Safety Committee**

The Committee is a forum for informal mutual exchange of information, chaired by the Ministry of Transport and Communications and with participants representing the Ministry of Justice, the National Police Directorate, the Mobile Police, the National Society for Road Safety, and the Public Roads Administration. The forum discusses current issues and exchange information on the work being done in the respective sectors.

#### **3.2 The National Road Safety Forum**

To ensure close practical cooperation between the parties concerned, the National Road Safety Forum has been established at a directorate level, under the Public Roads Administration. The participating bodies exchange information on planned measures and they ensure coordinated information campaigns. It is also intended to serve as a forum for the dissemination of knowledge concerning effective road safety measures.

### **3.3 Cooperation between various administrative levels of Government**

The Government considers it important for the work at the local government level to be organised in such a way as to ensure sufficient attention to road safety assessments. Accordingly, the Public Roads Administration has, among other things:

- Prepared a handbook containing guidelines for the formulation of municipal road safety plans. The handbook also contains a checklist concerning small children's journeys to school.
- Issued a collection of examples showing how to ensure road safety in the vicinity of schools.

### **3.4 Non-governmental Organisations**

Non-governmental organisations make significant contributions to the road safety effort, either under their own auspices or in cooperation with public authorities. The National Society for Road Safety, for instance, plays an important part. In recent years, the Ministry of Transport and Communications has supported about half of the organisation's budget. The organisation also receives financial project support, from the insurance sector among others. The Society's main task is to help schools and kindergartens with traffic education, with emphasis on the preparation of informative material, information in general, and the coordination of voluntary road safety efforts. It also contributes to the overall coordinated effort to combat road accidents, serving as a link between non-governmental organisations and the authorities, especially in relation to municipalities.

### **3.5 The commercial sector**

The commercial sector is a major user of transport services. Enterprises, engaged in transport or which buy transport services, demand safe transport. Such demands can help reduce the number of accidents and thereby lead to cost reductions, for instance by less damage to companies' own vehicle fleets. This can also contribute to a better working environment.

The Public Roads Administration is working on guidelines requiring safe transport services within the organisation, whether the transport is under its own auspices or bought from outside. Such guidelines could also be used by private companies, as a positive contribution to improved road safety.

## 4. ROAD NETWORK MEASURES

Local government can ensure satisfactory management of road safety by means of overall regional planning. If insufficient attention is paid to such matters at this stage, it may prove necessary at a later stage to adopt costly measures to ensure safety. Good regional planning is important, not least when the location of schools and residential areas is concerned. Both the Public Roads Administration and municipalities must take road safety into account at an early stage of the planning process.

In addition to increasing mobility, properly designed roads are important means to improve road safety. Many improvements to existing roads that may not primarily be aimed at safety are also beneficial in that respect. It is important to complement such measures with separate measures specifically aimed at road safety. The Public Roads Administration has continuously for years been undertaking various such measures. The Administration will in the years ahead have to adopt a wide range of physical measures, in order to obtain a good overall effect.

The Ministry of Transport and Communications also expects roadside ITS (Information Technology Systems), which communicate directly with cars without distracting drivers' attention from their driving, to play an important part in the future.



Photo: Knut Fjeldstad/Samfoto

The number of severe head-on collisions is often high on two- or three-lane roads carrying heavy traffic. Norway currently has few roads where the traffic is dense enough to make an upgrade to class A motorway cost effective. Improvement to four-lane dual carriageways with centre crash barriers can, however, have a beneficial effect on the number of casualties. Thus the Public Roads Administration is defining new road categories, including narrower and less expensive four-lane roads. Such roads can also improve mobility and reduce the commercial sector's transport costs.

Centre crash barriers on roads with fewer than four lanes are at present being tested in Sweden. In cooperation with the Public Roads Administration, the Ministry of Transport and Communications will keep this measure under continuous consideration during the 2002 to 2011 period as more experience is being gained in this area.

In reducing the number of head-on collisions, use of rumbled centre lines and improving curves will be important.

Among the measures the Public Roads Administration will implement in order to reduce the number of single accidents, are:

- Rumbled edge markings
- Straightening sharp curves
- Improving visibility, better road markings
- Guard rails

Steps will also be taken to reduce the severity of single accidents, including:

- Removing roadside obstacles (trees and the like)
- Levelling roadside terrain
- Use of forgiving utility poles
- Isolating projecting rocks and other obstacles

To reduce the number of accidents involving vulnerable road users, special attention will be given to physical measures such as road lighting and safe crossings (underpasses). Importance will also be attached to safe routes to schools.

The operation and maintenance of the road network is important to keep up the existing high safety standards.

Maintenance in general will be improved during the 2002 to 2011 period. In addition to improving mobility, such measures as maintenance of road surfaces also affect road safety. Effort in the field of accident-reducing maintenance is also prioritised; e.g. maintenance of guard rails.

Standards of winter maintenance (salting, snow removal, sanding etc.) are high. Improvements have nevertheless been planned for the 2002 to 2011 period. In the main urban areas, in particular, it will be important to keep the streets free from snow in view of the anticipated increase in the use of tyres without studs.

High standards of road markings and signposting will also be maintained. More up-to-the-minute information on roads, road conditions and traffic will be made available to road users, among other things by means of new technology. Information on incidents and on hazardous driving conditions will make it possible to adjust the driver's behaviour so as to avoid difficult situations. The Public Roads Administration will also step up the use of vehicle-activated speed information signs (feedback signs) in various parts of the country.

Furthermore, within the investment programme of the railway sector, securing of rail level crossings is given high priority in order to contribute to the reduction of casualties among road users.

## 5. MEASURES AIMED AT REGULATING BEHAVIOUR

The central authorities is responsible for using laws and regulations, to provide a satisfactory flow of traffic, while at the same time maintaining safety standards and safeguarding the environment. For the period 2002-2011 the use of laws and regulations figure prominently in the effort to improve road safety. That includes regulating speed limits and other measures aimed at regulating behaviour. A number of measures of that nature have direct and beneficial accident-reducing effects. The Government also attaches great importance to regulations designed to ensure that drivers concentrate on their driving task and are not impaired by alcohol or drugs, lack of sleep, or distraction by equipment in the vehicle.

However, the Ministry of Transport and Communications wishes to stress that the due care and attention requirement is fundamental to all road use. Thus every individual is responsible for using the road system so as not to cause damage or risk, and so that other road users are not unnecessarily obstructed or inconvenienced. This requirement is embodied in Section 3 of the Road Traffic Act, Basic Rules for Traffic, and applies regardless of whether or not specific additional regulations governing behaviour have been laid down.

### 5.1 Penalty point driving licence endorsements

The Ministry of Transport and Communications underline the importance of effective responses to hazardous behaviour in traffic. It appears to be especially important to have systems in place that produces concrete results in cases when drivers repeatedly violate road traffic legislation and demonstrate a lack of respect for the rules and a lack of concern for their own or other people's safety. The Public Roads Administration has accordingly proposed a system of penalty point endorsements of driving licences. This system was adopted by the Parliament 17 June 2002. The object of the system is to make consequences for a drivers right to drive if he repeatedly behaves undesirable in traffic.

The system is designed to cover violations of road traffic rules which constitute serious hazards to road safety and which are close to the limit beyond which driving licences are automatically suspended. The examples mentioned include dangerous overtaking, speeding, violating priority rules, and running a red light. According to the proposal, these violations shall in addition to the other penalties lead to penalty points, bearing on the offender's right to drive. A particular number of penalty points will result in suspension of the licence. Also under consideration is the possibility of imposing conditions for the return of the licence following such a suspension, for instance requiring more theoretical training or a new driving test.

The proposed system of penalty point endorsement of driving licences has been widely circulated for comment. On the basis of the comments received and the recommendations of the Public Roads Administration, the Ministry of Transport and Communications will, in cooperation with the Ministry of Justice, continue the work with specifying the contents of the scheme. The Ministry of Transport and Communications considers it important, in this connection, to emphasise simplicity of formulation and good coherence of accident rates and violations that lead to endorsements.

## **5.2 Speed limits**

Speeding has a major bearing on the number of accidents and how severe they are. Generally speaking, lower speeds would reduce the number of people killed or injured for life in traffic. In recent years, the speed level has increased on roads with higher speed limits than 60 kph.

In connection with the Norwegian Road and Road Traffic Plan 1998-2007, the Public Roads Administration carried out a study of the speed limit system outside built-up areas.

The speed limit system should be designed so as to lower speeds particularly along the roads where the more severe accidents occur. Thus, in connection with the preparatory work for the National Transport Plan 2002-2011, the Public Roads Administration carried out a new assessment of whether or not the present general speed limit outside built-up areas ought to be lowered from 80 to 70 kph. The Administration concluded that the 80 kph limit should be retained. In line with these assessments, it was decided that the general speed limit outside built-up areas should remain at 80 kph. In accordance with the recommendation by the Public Roads Administration, there should, however, be a wider scope for adopting 70 kph as a special speed limit. Another measure of interest is lowering the speed limit for certain roads from 90 to 80 kph.

The Public Roads Administration has prepared new criteria for the use of special speed limits outside built-up areas. The criteria were adopted 4 July 2001. Calculations suggests that initially some 10 per cent of the present national road network with an 80 kph general speed limit should be reduced to 70 kph as a special speed limit, compared to 3 per cent today. For county roads the changes will have less significance.

In connection with the introduction of lower speed limits as an instrument for improving safety on certain road stretches, higher speed limits are permitted on stretches where road safety standards are high. This is important as one means of securing general respect for speed limits, although according to Section 3 of the Road Traffic Act road users are themselves responsible for adjusting their speed according to the prevailing conditions. In line with the Public Roads Administrations recommendation, trials of special 100 kph speed limits for high-standard multi-lane motorways where accident rates are low are carried out. This will apply to about 60 km of the present motorway network.



Photo: Knut Fjeldstad/Samfoto

Where the system of speed limits in built-up areas is concerned, the Public Roads Administration is experimenting with lower speed limits within the framework of the current provision, which sets the general speed limit at 50 kph. The Administration has recommended reducing the speed limit to 30 kph in residential streets and central business districts where there are not sufficiently safe crossings for pedestrians and cyclists. The injury risk for pedestrians being hit by a car is taken into account. The Ministry of Transport and Communications requests municipalities to base their decisions on this recommendation when setting speed limits for the municipal road network.

At present, the general speed limit in built-up areas will remain 50 kph. The Ministry will, however, keep the need for changes in the speed limit system in built-up areas under review in the light of the results of experiments with 30 and 40 kph limits and of an ongoing research project on this subject. A proposal from the Public Roads Administration for new criteria for the use of speed limits in built-up areas is currently being widely spread for comments.

Vehicles with maximum authorised mass of 3.5 tons are, according to Norwegian Basic Rules for Traffic, not permitted to drive at speeds exceeding 80 kph even where the speed limit may be higher. The Ministry of Transport and Communications will assess whether or not busses shall be allowed to drive at speeds up to 90 kph in accordance with the speed limit. In this respect, the practicability and safety aspects of such a measure and possible other conflicting regulations will be taken into account.

### **5.3 Maximum blood alcohol limit for drivers of 0.2 per thousand**

A proposal to lower the maximum blood alcohol limit to 0.2 per thousand was presented to the Parliament in December 1999. The influence of alcohol on motor vehicle drivers is the one single factor that increases the risk of road accidents the most. The influence of alcohol has been shown to impair driving skills even at low values. However, analyses of the effects of lowered limits in other countries show generally slight reductions in the number of accidents. Nevertheless, a lower limit may lead to increased awareness and a greater social pressure not to drive under the influence of alcohol. The object of the proposal was to establish quite clearly that alcohol and driving do not go together. A lower limit may help to eliminate drivers with low blood alcohol concentration levels and drivers who take chances with the limit of 0.5 per thousand and in fact drive while impaired. The proposal was debated and adopted by the Parliament in June 2000. The new 0.2 limit entered into force on 1 January 2001.

### **5.4 Other intoxicants than alcohol**

The present Road Traffic Act clearly imposes a ban on driving under the influence also of other drugs. Other drugs are being found in a growing proportion of the samples taken on suspicion of driving while intoxicated, and the number of substances per sample is also rising. A systematic routine for finding out when drivers are under the influence of other drugs has been set up in cooperation between the police and medical authorities; in each case a thorough overall assessment of the intoxication is carried out. Such assessments have led to penalties in a higher number of cases in Norway than for instance in Denmark, Sweden and Finland.

Inquiries conducted by the National Institute of Forensic Toxicology on behalf of the Ministry of Transport and Communications have shown that the present system of individual assessment of intoxication functions satisfactorily. In cases where other drugs are suspected, such intoxicants are found in 70 per cent of the cases, and on the average 2 - 3 substances are found in one and the same sample. The substances that are most frequently found in such cases are cannabis, amphetamine, sedatives and soporifics.

The National Institute of Forensic Toxicology is participating in a working party under the EU, which is studying the influence on drivers of other intoxicants than alcohol. Among the matters under consideration is the possibility of laying down limits for narcotics, and experiments are in progress aimed at developing methods of detecting the use of such substances. The Ministry of Transport and Communications will be following developments in this area closely.

### **5.5 Use of electronic equipment in motor vehicles - hand-held mobile phones**

The Ministry of Transport and Communications is authorised to issue more detailed provisions concerning the prohibition of the use of electronic equipment that can disturb the driver in motor vehicles.

Electronic equipment is playing an increasingly important part in the road transport sector. This comprises everything from technical engine components to in-vehicle electronic equipment. Electronic equipment is opening up numerous ways of providing drivers with updated information, contributing to improved mobility and road safety. Increased use of certain types of such equipment can, however, also entail a risk of drivers to be less focused on the actual driving task.

The number of mobile phone subscribers in Norway has risen sharply up to the present. The use of mobile phones while driving entails a somewhat higher risk of accidents. This increase in risk, together with the rapid rise in the number of mobile phones, is the reason why the Ministry of Transport and Communications has introduced a ban on the use of hand-held mobile phones while driving a motor vehicle. The prohibition entered into force on 15 March 2000. In the Ministry's view, it will also be important for the authorities to observe the use of other types of electronic equipment and to consider measures aimed at diminishing any undesirable effects on road safety that may follow from the use of such equipment.

## 6. MEASURES RELATING TO MOTOR VEHICLES

With the exception of too little tyre tread depth, technical faults in vehicles are only to a minor degree the causes of accidents with light vehicles. Where heavy vehicles are concerned, however, some connections are found between technical defects and deficiencies and accidents. Vehicle defects also affects the severity of such accidents. This applies both to the people in the vehicle and to other road users. Air bags, safety belts, children's seats, crumple zones etc. are all important components in improving road safety.

Developments related to many of the technical devices are often promoted by the car industry. Thus, it is important for the authorities to try to influence developments in this industry in the direction of greater road safety. Within the framework of cooperation in the EU and EEA, numerous rules and instructions are being laid down concerning vehicle technology.

The Ministry of Transport and Communications regards it as important for Norway to play an active part in the process of developing such rules so as to keep attention focussed on the safety aspect.



Photo: Knut Fjeldstad/Samifoto

## 7. ENFORCEMENT

Road traffic legislation lays down the fundamental parameters for traffic behaviour. The potential improvement in road safety if everyone observed the rules has been estimated at a 27 and 48 per cent reduction respectively in the numbers injured and killed (TØI working report 1073/1997). However, active use of a number of instruments is necessary to achieve the desired compliance with the rules; e.g. roadside checks. The extent of surveillance bears significantly on the subjective and objective risk of apprehension and thus makes an important contribution to reducing the number of violations. The Ministry of Justice emphasises that increases in the number of roadside checks for the purpose of uncovering speeding and intoxicated drivers are believed to be effective in reducing the numbers of fatalities and severe injuries. However, roadside checks alone are not sufficient. Subsequent reactions to violations of the rules must also have a preventive effect. The Government is for the time being considering the usefulness of more frequent bans on the use of a vehicle by confiscating the vehicles if the owner or user commits repeated serious offences.

### 7.1 Surveillance

The Public Roads Administration and the police are both engaged in extensive surveillance activities. They cooperate closely in a wide range of areas.

The police play a decisive role in achieving compliance with the rules by road users. The Ministry of Justice will work to encourage law-abidingness on the part of each individual road user. Among the ways of doing so are roadside checks for the purpose of uncovering speeding, intoxicated drivers, failure to use personal safety equipment, and aggressive traffic behaviour. To achieve the desired behaviour, in this respect, emphasis is placed on visibility and the subjective risk of being observed. It is important that road users perceive police monitoring to be unpredictable with regard to the time and place. On the other hand, it is also important to concentrate monitoring on times and places with high percentages of violations of whatever kind, without thereby reducing the unpredictability and effectiveness of the roadside checks.

The police annually check two million motor vehicle drivers. It is a target to increase the effect of police surveillance. The Police Districts and the Mobile Police set targets themselves for the various kinds of roadside checks carried out and the reductions in the numbers of accidents. In its road safety effort the Ministry of Justice also attaches importance to the increased feeling of security experienced by road users owing to the police presence. Investigation and prosecution and special preventive services are areas that also figure prominently in the overall road safety effort exercised by the police.



Photo: Knut Fjeldstad/Samfoto

The extensive monitoring carried out by the Public Roads Administration is also a very important element in the road safety effort. Among the things being checked by the Administration is the use of safety equipment (such as safety belts), driving and resting periods, overloading, and roadworthiness of vehicles. During the 2002-2011 period the intention is to increase the frequency of roadside checks on the use of personal safety equipment and roadworthiness of heavy vehicles.

The Public Roads Administration and the police collaborate on carrying out automatic speed controls. This measure is already being used extensively. The Ministries of Transport and Communications and of Justice agreed on a plan to extend the use of automatic speed control in the 1999 - 2002 period. According to the plan, the system will, when completed, comprise some 360 checkpoints. In the 2002–2011 period, automatic speed control will accordingly be widely distributed, and will play an important role in the range of instruments designed to reduce the number of road casualties.

At present there are about 200 fixed automatic speed control checkpoints in operation in Norway. To increase the flexibility of this measure, the Public Roads Administration is currently working on the introduction of digital cameras and new methods of measuring speed. This should provide equipment that can be moved from place to place and be used in places where it is difficult to operate fixed equipment. Such mobile equipment can extend the use of automatic speed control to road tunnels, long bridges, and areas around schools, and can be moved to roads where speeds are high and accidents frequent. The great flexibility of mobile equipment will make better utilisation possible, and avoid the problem that road users know where cameras are located.

## **7.2 Shared responsibility for monitoring**

Automatic speed control is a measure to which both the police and the Public Roads Administration contribute actively, and the effectiveness of which depends on how well they cooperate. In the opinion of the two Ministries, cooperation in this area is satisfactory. Thus, there does not at present appear to be a need for any major changes in the routines and forms of cooperation or in the allocation of responsibility. Basic guidelines have now been drawn up for the allocation of responsibilities and tasks between the services where the operation of automatic speed control is concerned. Together with the criteria established for the use of automatic speed control and the plan for its extension, this will provide a basis for good utilisation of this instrument.

Both the police and the Public Roads Administration carry out roadside checks of driving and resting periods. With regard to Norway's obligations under the EEA Agreement and the desire to ensure that the practical application of the rules for this kind of roadside checks is as uniform as possible, the monitoring duties of the two services in this respect have been reviewed. The main principles were then laid down for the total scale of these roadside checks, the allocation of checking duties, and mutual and external reporting. Joint instructions for the police and the Public Roads Administration regarding enforcement in connection with this kind of check will also be issued.

It is otherwise the opinion of the Ministry of Transport and Communications that the present allocation of monitoring assignments and responsibilities between the police and the Public Roads Administration generally serves its purpose.

The current rules governing the use of fixed penalties and charges for violation of road traffic legislation will, however, be evaluated by the Ministry of Transport and Communications and the Ministry of Justice, taking into account the monitoring tasks at present allocated to the police and the Public Roads Administration. Among the questions to be considered are, whether a single contravention, at present qualifying for fixed penalties could in the future be punishable by charges, and whether there are other violations for which simplified reactions such as fixed penalties or charges might be appropriate.

## 8. TRAFFIC TRAINING AND INFORMATION

Traffic training and information are important contributions to an efficient traffic system, from the point of view of both mobility and road safety. Training and information are important in relation to understanding of and respect for the rules and for driving itself.

Kindergartens, schools and driving schools do all provide traffic education. As to kindergarten and school training, the Ministry of Education and Research plays an important part, in cooperation with the police, the Public Roads Administration, and the National Society for Road Safety.

In order to be able to move about safely in traffic, road users need access to updated information about a road system undergoing constant change, both in its physical construction and in the rules for its use. Attitudes are a result of learning over time. The transfer of information, whether by campaigns or as information given more generally on such matters as road conditions and recommended speed limits, is thus an important feature of road safety efforts. In this connection, it is important not to focus only onto what is permitted or prohibited at any given time. It may be desirable also, in a positive way, to influence behaviour that is not subject to regulation. Various public agencies, non-governmental organisations, the insurance companies and others can in this respect take part in influencing road users. It is important, for instance, to encourage the use of such safety equipment as bicycle helmets. In addition to the Public Roads Administration, a number of other public bodies such as the Ministry of Justice, the Ministry of Health, the Ministry of Social Affairs, and the Ministry of Education and Research undertake information work related to traffic and road safety.

### 8.1 Traffic education in schools

Traffic education is important at all levels of the school system. The three-year pre-school teacher training course contributes to the achievement of this objective in kindergartens. Here, traffic is one of a number of inter-disciplinary areas in the field of attitude-building.

In primary school, traffic and road safety is not a separate discipline. Traffic is a topic that needs to be presented across subject boundaries so as to bring out the width of the entire problem area.

As a special topic, traffic is included in the social studies curriculum for the first and second years. The curriculum states among other things that pupils are to be made acquainted with the existence of laws and rules that it is important to observe, among other things in road traffic. Children are also to be given training in safe road use. The Ministry of Education and Research considers it important for schools to follow this up closely. In connection with traffic training, the police base their assistance

given to schools on a special traffic instruction course. The National Society for Road Safety also plays an important part in the production of teaching material. The Ministry of Education and Research also wishes to maintain the effort, in cooperation with other professional bodies, to ensure that primary school pupils can get safely to and from the school. At lower secondary school stage, certain schools have tried to communicate knowledge about the roles of road users by providing moped driver training as an optional.

In consultation with the Ministry of Education and Research, the Ministry of Transport and Communications is at present considering the establishment of a working party to study and report on traffic education in basic school. The Institute of Transport Economics has at the request of the Ministry of Transport and Communications drawn up a proposal concerning traffic training of small children.

The Ministry of Education and Research is also the authority responsible for upper secondary traffic education, such as vocational driver training and the optional subject traffic education and driving instruction. In this connection there is extensive cooperation with the Public Roads Administration, for instance in the field of driving instruction. In the view of the Ministry of Education and Research, driver training will in time become integral in the compulsory upper secondary school curriculum, cf. the discussion below of the ongoing work on the establishment of a traffic-related course as an optional. However, before this is implemented, thorough consideration will have to be given to the scale and contents of possible compulsory driver training in upper secondary school.

To ensure that the training in the school system is of a sufficiently high quality, it is important for the teachers to have the qualifications needed. The National Training School for Driving Instructors figures prominently in this respect, in its training of the driving instructors employed at private driving schools and as special subject teachers in upper secondary school. The Ministry of Education and Research is planning to strengthen both the technical skills of driving instructors and the educational methods of driving instruction, cf. the discussion below on driver training. Traffic education is moreover compulsory in the plan outlined for the four-year general teacher-training course.

## **8.2 Driver training**

As a part of a thorough examination of all aspects of driver training, the Public Roads Administration has carried out a review of the instruction requirements for every category of driving licence, and of the training needs of driving instructors and of the commercial driving schools as educational establishments.

In the light of this review, the Ministry has carried out a preliminary evaluation of driver training for category B licences. The review by the Public Roads Administration and the results of a research project (concluded in February 2001) concerning the possibility of learner drivers to increase driving experience before taking their driving test, is the basis upon which further development of the scheme will be outlined.

The Ministry of Transport and Communications will introduce a module-based training scheme in which fundamental subjects are gathered in a traffic course, with category-specific additional courses according to the category of licence candidates wish to obtain. In cooperation with the Ministry of Education and Research, the Ministry of Transport and Communications will seek to make arrangements for the provision of such a course as an optional subject in schools. This could stimulate greater interest in



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traffic education, both in schools and on the part of individual pupils, while at the same time preparing the ground for further driver training. In connection with this training scheme, the Public Roads Administration will revise existing curricula and draw up formal curricula for tractor and snowmobile driving.

In the future development of the training course leading to category B driving licences, the Ministry of Transport and Communications will concentrate on the following:

- Continue to motivate and encourage candidates, for instance by private driver training, to increase driving experience before taking their driving tests.
- To a greater extent ensure that the private driver training is of sufficient quality and is effectively and safely executed.
- Arrangements must be made so that driving schools are encouraged to coordinate the training they offer with private driver training.
- Improve the qualifications of those accompanying learner drivers in private driver training. Courses should be provided for companions and learners, and informative material and advisory services should be made available.
- An introductory course and information session should be introduced and offered to everyone intending to begin driver training.
- Compulsory first aid training should be introduced.

The Public Roads Administration will consider the scale of, and the subjects to be included in, further compulsory training for all categories of driving licence. This applies to subjects which for safety, educational or practical reasons are difficult to include in private training. Examples include driving under icy conditions, night driving, and first aid also for other driving licence categories than category B.

The Ministry of Transport and Communications regards it as important to extend the existing training scheme leading to motorcycle driving licences, category A. To achieve this objective the central road authorities, in close cooperation with such organisations as the Norwegian Motorcycle Union, have started to work with the following aims, among others:

- To build up a training course for examiners and instructors for the category A licence.
- To encourage the development of up-grading and further training courses for motorcyclists.
- Motorcycle training to be further developed, with special attention to the cyclists' qualifications, including their driving skills.
- Develop the driving test so as to assure the quality of the motorcyclists' overall qualifications.

Where training for drivers of heavy vehicles is concerned, the Public Roads Administration is seeking to improve the courses in driving under icy conditions, among other things focussing more closely on safe behaviour in traffic. The Ministry of Transport and Communications is considering making the icy conditions driving courses for heavy vehicle compulsory for driving licence applicants from all over the

country, which is not the case at present. The Ministry will also be looking more closely at whether other elements of heavy vehicle training should be made compulsory. This applies especially to subjects, which are regarded as important to road safety, but difficult or particularly costly to assess during the driving test.

The Ministry of Transport and Communications wishes to ensure that applicants do not take the driving tests without sufficient knowledge or skills. To this end, the Ministry will:

- Propose that driving schools hold compulsory pre-tests (theoretical and/or practical) before candidates are allowed to take the driving test.
- Consider more closely whether a quarantine period should be introduced, preventing someone who has failed the driving test from taking it again before the quarantine period has elapsed.

In cooperation with the Ministry of Education and Research, the Ministry of Transport and Communications will seek to gradually build up driving-instructor education to college level. In the longer term, higher qualifications will be demanded both for approval as a driving instructor and for appointment as a driving examiner. The Ministry will also consider introducing technical and educational updating requirements for driving instructors and examiners/supervising personnel. The Public Roads Administration will also consider whether periodic renewal of driving licences in the categories A and B should be required. The Administration will also consider whether stricter health requirements should be imposed in connection with the renewal of category B licences before the holder has reached the age of 70.

The Ministry of Transport and Communications regards it as important to increase safety while maintaining the mobility of elderly people in road traffic. With this in mind, National Resource and Competence Centre for Elderly Drivers was set up in 1999. The Centre is intended to serve as a nationwide coordinating body for services to elderly drivers. The Public Roads Administration will be working to establish training or refresher course facilities for drivers aged 65 and over, in addition to preparing suitable information for the elderly.

There will be conducted experiments aimed at developing relevant test methods for ascertaining the driving capabilities of elderly people. In this respect, a survey is to be carried out on complicated traffic conditions along the roads, which cause problems for elderly drivers.

### **8.3 Information by the Public Roads Administration**

Information to road users is an important element of road safety work. When information is combined with specific road safety measures, this adds to the effect of information.

The Public Roads Administration coordinates major national road safety campaigns with the police, the National Society for Road Safety, and other cooperating bodies.

The aim of all such campaigns is to have a positive influence on the road users' attitudes and behaviour. Campaigns and information in general are combined with other measures. Campaigns are subject to annual evaluations. In the next few years, the Public Roads Administration will be concentrating on major information campaigns concerning use of safety belts, speed reduction, cycling and walking to school.

In addition, information measures will be targeted at heavy vehicle traffic, motorcyclists, young people, elderly drivers, road tunnel safety, etc.



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## 9. BUILDING OF KNOWLEDGE

New and updated knowledge is vital in enabling the authorities to implement effective road safety measures.

### 9.1 International exchanges of information

The Ministry of Transport and Communications finds it important to exchange information on road safety in international fora such as the United Nations – Economic Commission for Europe, the European Conference of Ministers of Transport, the Nordic Council of Ministers, the World Road Associations, the Nordic Road Association, and the EU/EEA. The Ministry sees Norwegian participation in such fora as an important means to the building of the best possible knowledge base for the implementation of national measures.

### 9.2 Research and development

The Ministry of Transport and Communications and the Public Roads Administration are to a great extent financing research on road safety. Other Ministries and government bodies and the insurance sector are also major contributors. This research is vital when the implementation of measures is being considered. For Norway to be able to stay up front with the leading nations in the field of road safety it will, in the opinion of the Ministry of Transport and Communications, be important to maintain high standards of national road safety research by:

- Giving the major Norwegian road safety research centres predictable framework conditions.
- Learning from research done abroad.

We have comprehensive knowledge about the effect of numerous road safety measures. Much of this has been summarised in the road safety handbook issued by the Institute of Transport Economics, in which the effects of 124 different measures are described.

The Ministry of Transport and Communications will continue to give high priority to research on road safety. Among the matters that the Ministry believes are important to learn more about, are the mechanisms underlying road user behaviour. Such knowledge would help to explain why some measures do not have the expected effect on road safety, and help to lay the foundation for the development of new road safety measures. Thus, in the 1998 to 2001 period, the Public Roads Administration is carrying out a comprehensive road user safety project, which includes an attempt to develop a driver behaviour model based on Norwegian data.



### **9.3 Analysis of the road network**

In addition to its R&D work as such, competence building within the service is of utmost importance to the Public Roads Administration. It has for many years been an important part of the road safety effort to remove black spots and improve dangerous roads. As a result of such efforts and of the construction of new roads, there are now fewer black spots and hazardous roads. By means of various types of instruments developed within the service, the Public Roads Administration will systematically carry out road safety auditing on existing roads. The Administration will begin with the stretches of road with the most frequent and most severe accidents.

Road safety auditing is part of the Public Roads Administration's quality assurance system. Auditing of new road projects includes a professional assessment of each project's safety standard. The method will be further developed for use also on existing roads, so as to make it easier to identify circumstances that lead to severe accidents.

### **9.4 Accident analysis groups**

The Public Roads Administration has set up accident analysis groups in a number of counties, which all work according to the same detailed guidelines. The groups will not analyse all traffic accidents, but will concentrate on particular types of accidents such as fatal accidents, injury accidents involving heavy vehicles, pedestrian accidents and so forth. Together with official accident statistics and other knowledge in the area of road safety, the analyses by these groups will make us more able to arrive at effective safety measures.

The Ministry of Transport and Communications assumes that altogether the results of these analyses will be a helpful contribution to the development of the future road safety policy.

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