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## **NORWAY - NATIONAL REPORT**

**STRATEGIC DIRECTION SESSION STC**

**A STRATEGIC APPROACH FOR SAFETY:  
PUTTING KNOWLEDGE INTO PRACTICE**

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## **1. INTRODUCTION**

For many years, Norway has occupied a favourable position in international statistics over road traffic accidents. The reasons include many years of systematic and cross-disciplinary efforts to improve road safety. In 2009, Norway ranked fifth among the OECD countries in terms of having the lowest number of road fatalities in proportion to the total population.

This report presents the National Plan of Action for Road Traffic Safety 2010-2013 that has been compiled by the Directorate of Public Roads, the Directorate of the Police, the Directorate of Health, the Directorate of Education and Training and the Norwegian Council for Road Safety. In addition, the county authorities, 19 other associations and the military have made contributions.

This is the third plan of action to be compiled in Norway. The plan is based on Vision Zero as a fundamental principle for the efforts to improve road safety. It also reflects the preconditions laid down by the National Transport Plan 2010-2019 which state that the number of fatalities and severe injuries should be reduced by one third during the ten-year period and from 1150 to 950 occurrences per year by the end of the four-year period.

The plan of action identifies the measures that must be taken in order to render it likely that these reductions will occur. In total, the plan describes 152 measures that will be implemented by the national actors. Steps to be taken by other involved parties are also described.

In the context of a major national administrative reform, responsibility for large parts of the national road network was transferred to the county authorities from 1 January 2010. This has turned the county authorities into key actors with regard to road safety. Because the reform was implemented well after work on the plan of action had started, the county authorities have not been given the attention that this area of responsibility would indicate. This should be taken into account during the next revision of the plan.

The implementation of the plan will be subject to annual evaluations.

## **2. BACKGROUND AND STRATEGIES**

The Government has decided that the efforts to improve road traffic safety in Norway should be based on a vision of zero fatalities and severe injuries in road traffic – Vision Zero. During the parliamentary debate of Report no. 16 (2008-2009) to the Storting, National Transport Plan (NTP) 2010-2019, it was decided that an ambition to reduce the number of fatalities by one third before 2020 should be established as an intermediate goal. This implies that this number should be reduced from an expected level of 1150 in 2010 to a maximum of 775 in 2020 (Figure 1). Accordingly, the number of fatalities and severe injuries should be reduced from approximately 1150 at the start of the planning period to approximately 950 in 2014.

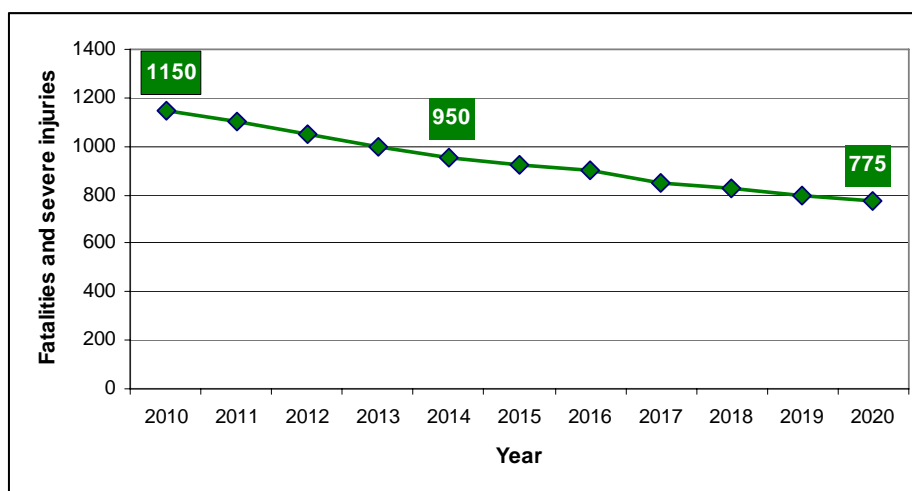


Figure 1 – Reductions in the number of fatalities and severe injuries that will be required to reach the goals stated in Report no. 16 (2008-2009) to the Storting – NTP.

The purpose of this plan, the National Plan of Action for Road Traffic Safety 2010-2013, is to outline the challenges faced by current Norwegian efforts to improve road traffic safety, and to describe the measures that will be taken during the planning period to ensure that we maintain a steady course towards fulfilment of the Government's goals. Funding to implement the measures described by the plan will be allocated to the annual budgets of the directorates and the Norwegian Council for Road Safety.

The main actors behind the plan are the Norwegian Public Roads Administration (NPRA), the police, the Directorate of Health, the Directorate of Education and Training and the Norwegian Council for Road Safety.

The level of ambition and the priorities in the plan of action concur with the NPRA's plan of action for 2010-2013, the police force's strategic plan for road traffic policing 2008-2011, 'Accidents in Norway – National Strategy for Prevention of Accidents Leading to Injury' (inter-departmental plan), the strategic plan of the Council for Road Safety 2010-2013 and the county authorities' programme of action for the county road network 2010-2013.

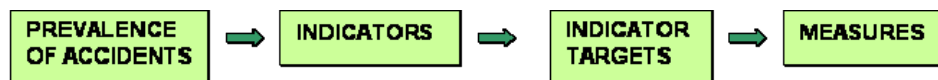
The efforts to improve road traffic safety and the plan of action comprise measures in four separate areas:

- Measures targeting road users
- Road improvement
- Measures targeting vehicles
- Prevention of injury

Various indicators have been developed with associated indicator targets defining the goals to be reached by the end of the period with regard to the three first areas. In addition, separate goals have been established for the targeted reductions in the number of fatalities and severe injuries among three groups of road users who are especially vulnerable to accidents: young people (16-24 years), the elderly (65 years or older) and motorcyclists.

Care has been taken to set realistic targets in light of the guidelines for the efforts to improve road traffic safety in the period 2010-2013. This means that we can expect the indicator targets to be achieved and the number of fatalities and severe injuries to be reduced to approximately 950 in 2014 if the measures are implemented in the manner foreseen. It should be noted, however, that the correlation between implemented measures, changes to the prevailing situation and the number of fatalities and severe injuries is in many cases poorly documented. The assessments of the steps required to reach the goals are therefore based on a combination of estimates and professional discretionary judgment.

The plan has been structured according to a model in which the correlation between the number of accidents, indicators, indicator targets and measures can be illustrated in the following manner:



*Figure 2 – Relationships between the number of accidents, indicators, indicator targets and measures.*

This results in four levels:

- Level 1: Vision Zero, the basis for all efforts to improve road traffic safety
- Level 2: Intermediate goal for the maximum number of fatalities and severe injuries in road traffic (max. 950 in 2014 and max. 775 in 2020)
- Level 3: Indicator targets, i.e. goals to be reached in order to achieve the intermediate goal
- Level 4: Measures that must be taken in order to reach the indicator targets

### **3. PREVALENCE OF ACCIDENTS**

The National Action Plan for Road Traffic Safety 2010-2103 contains a number of diagrams that illustrate various aspects of the accident situation. A brief summary of the main features of this situation and its development trend is provided below.

In 2009, Norway held fifth place among the OECD countries in terms of having the lowest number of road fatalities as a proportion of the population (Figure 3).

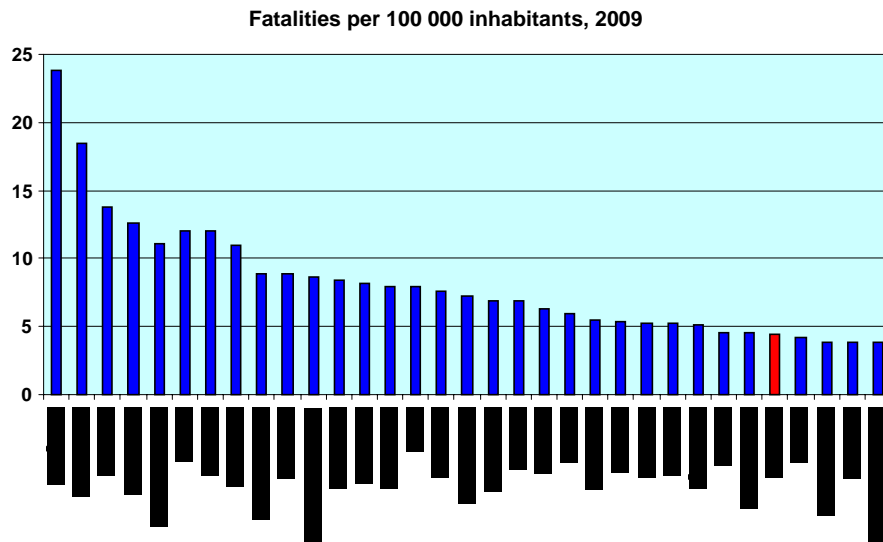


Figure 3 – Number of fatalities per 100 000 inhabitants in Norway compared to the other OECD countries (Source: International Transport Forum - IRTAD Database)

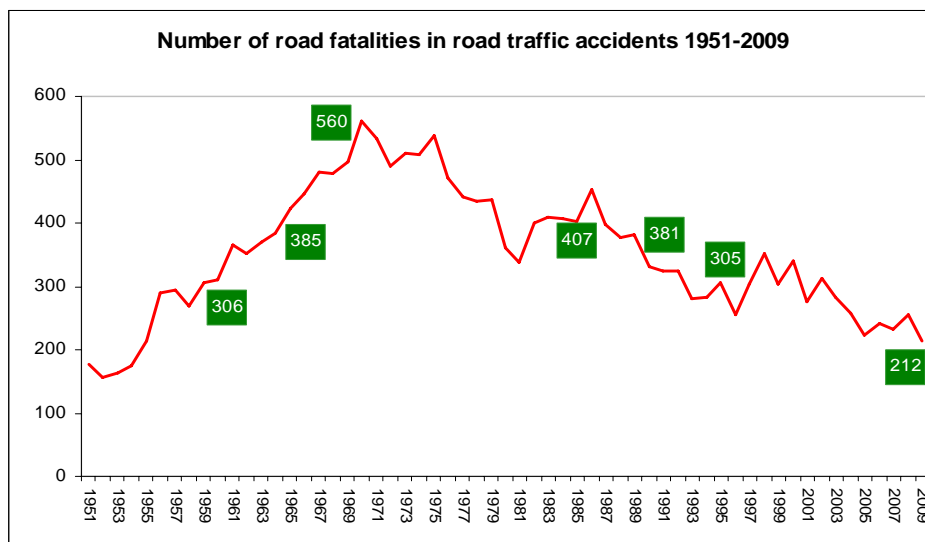


Figure 4 – Road traffic fatalities in the period 1951-2009 (Source: Statistics Norway)

Until 1970 the number of traffic accidents resulting in injury rose in proportion to the increase in the traffic volume. Since then, there has been a positive development. In 1970 a total of 560 road traffic fatalities were registered, but only 212 in 2009. In other words, during the period from 1970 to 2009 the number of fatalities has been reduced by half, while the traffic volume has tripled.

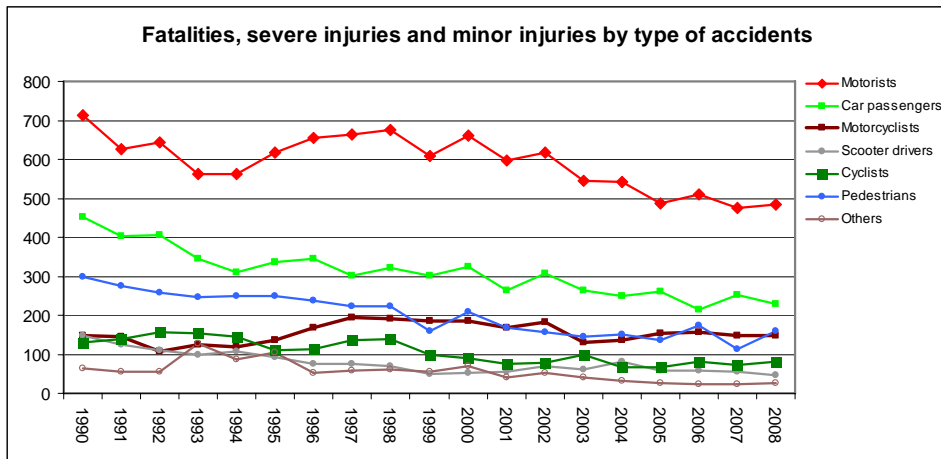


Figure 5 – Distribution of fatalities and severe injuries by groups of road users in the period 1990-2008 (Source: Directorate of Public Roads)

Figure 5 shows that during recent years, the reduction in fatalities and severe injuries has been most prominent among motorists and their passengers. However, they still account for the largest groups of road users who are most affected, and we should therefore continue to focus on these groups.

The death risk for motorcyclists is ten times higher than for car drivers and passengers, approximately six times higher than for cyclists, and more than eight times higher than for pedestrians. On the other hand, the death risk per kilometre in a car is more than ten times higher than in planes and trains, and approximately four times higher than for bus passengers.

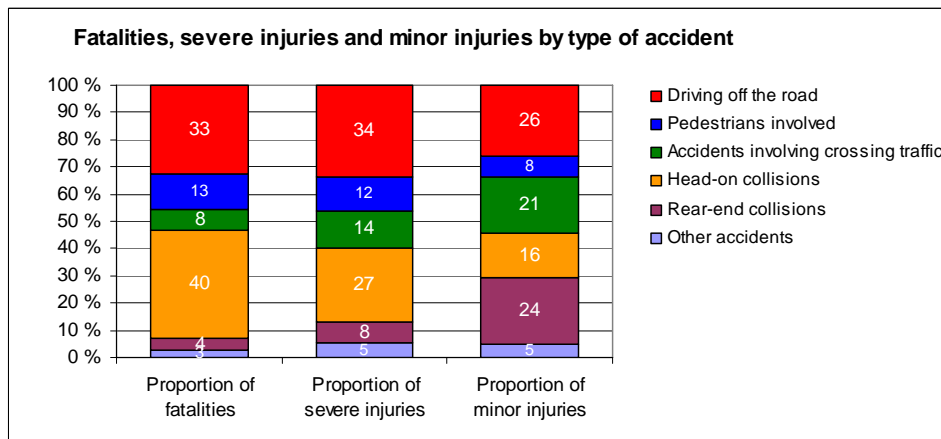


Figure 6 – Fatalities, severe injury and injury by type of accident. Average 2005-2008 (Source: Directorate of Public Roads)

Head-on collisions and driving off the road dominate the accidents involving fatalities and severe injuries (Figure 6). A total of 73 per cent of the fatalities occurred in head-on collisions or driving off the road, of which the head-on collisions alone account for 40 per cent. If accidents including pedestrians are included, the proportion increases to 86 per cent.

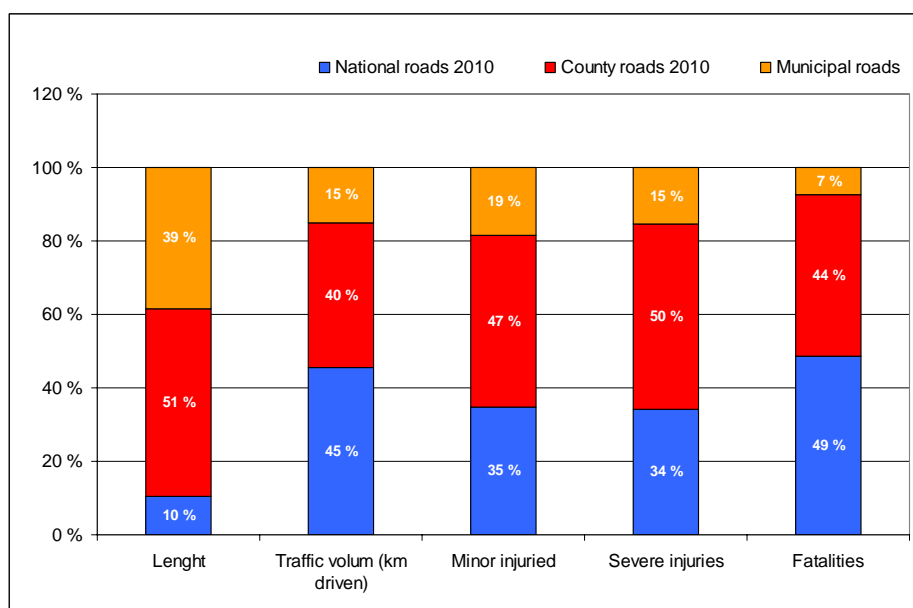


Figure 7 – Severity of injury by road category. Average 2005–2008 based on the road classification from 1 January 2010 (Source: Directorate of Public Roads)

Approximately 46 per cent of the fatalities and severe injuries occur on the county road network, and approximately 35 per cent on the national road network (average 2005-2008).

If we look only at the fatalities, Figure 7 shows that 49 per cent of them occur on the current national road network, despite the fact that these roads account for only ten per cent of total public road kilometres. Only seven per cent occur on municipal roads that account for 39 per cent of the total length of the public roads.

Head-on collisions constitute the most prominent challenge on the national roads, while driving off the road most often occurs on the county road network, and accidents involving pedestrians tend to occur most often on the municipal roads. A total of 55 per cent of all fatalities and severe injuries resulting from head-on collisions occur on the national road network. Close to 60 per cent of all fatalities and severe injuries resulting from driving off the road occur on the county road network, while 40 per cent of all fatalities and severe injuries among pedestrians occur on the municipal roads.

Degree of injury	Cost (NOK per case)
1 fatality	33 072 000
1 severe injury	9 734 000
1 minor injury	998 400

Table 1 – Costs of accidents for various degrees of injury in NOK (prices as of 2009) (Source: NPRA)

The total social cost of traffic accidents has been estimated at approximately NOK 28 billion per year. This figure includes the costs of those accidents involving injury that are not captured by official statistics, as well as material damage reported to insurance companies. If we distribute the costs by degree and type of injury we arrive at the result shown in Table 1.

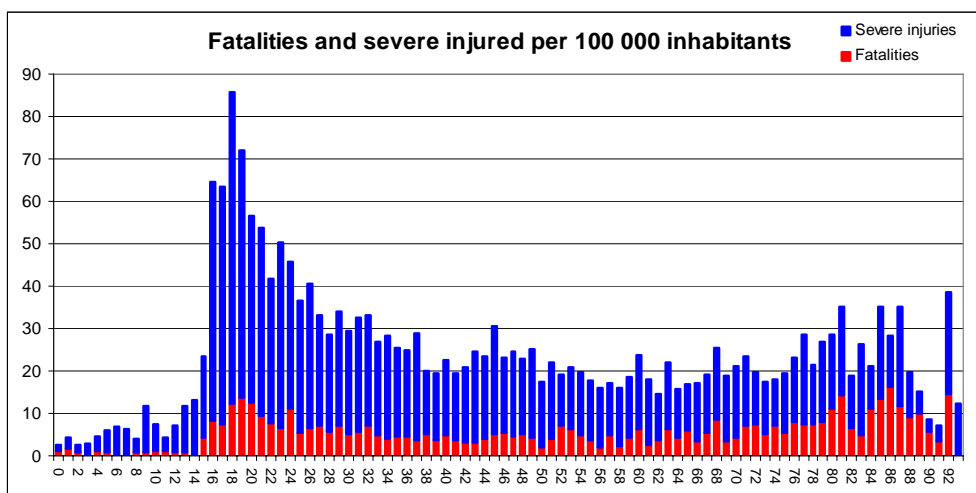


Figure 8 – Distribution of fatalities and severe injuries by single-year age groups per 100 000 inhabitants. Average 2005–2008 (Source: Directorate of Public Roads)

Each year, approximately 70 fatalities or severe injuries occur in the age group 16-19 years, per 100 000 inhabitants. The corresponding figure for the age group 40-70 years is approximately 20. An eighteen-year-old driver with a recently-acquired driving licence has a risk of driving off the road which is approximately forty times higher than an experienced driver. If we focus on the number of fatalities per 100 000 inhabitants, we can see, however, that the risk is approximately at the same level among the elderly as among the youngest motorists (Figure 8).

Approximately 20 per cent of the fatalities and severe injuries occur in densely built-up areas, while 80 per cent occur outside such areas. In the early 1990s, this distribution constituted 35-40 per cent in densely built-up areas and 60-65 per cent outside such areas.

Head-on collisions and driving off the road dominate among the most serious accidents outside densely built-up areas, while accidents involving pedestrians and cyclists are predominant in densely built-up or urban areas.

#### 4. MEASURES

The plan of action includes a total of 152 traffic safety measures that the national institutions of the Norwegian Public Roads Administration, the police, the Directorate of Health, the Directorate of Education and Training and the Council for Road Safety are obligated to implement during the period 2010-2013. The measures have been selected and formulated according to specific requirements, based on the key principles of Vision Zero. The plan states that to the largest extent possible the measures should seek to:

- be specific and concrete, and not constitute declarations of intent
- be different and additional to previous efforts. “Old” measures that deserve to be continued have been included
- have the potential to provide an expected benefit in terms of traffic safety



- be formulated in a manner that facilitates follow-up

The measures are subdivided into four main types: Measures targeting the road users, road improvements, measures targeting the vehicles and prevention of injury.

#### 4.1 Measures targeting road users

The plan defines two approaches to the measures targeting road users. First, to implement measures targeting types of accidents or groups of road users with a high rate of fatalities and severe injuries. Second, to implement preventive measures, especially with regard to children and young people, based on the idea that proper attitudes are formed at a young age. Key instruments with regard to road users are training, information and monitoring.

The chapter on measures targeting road users describes 79 different measures. The NPRA is committed to following up 43 of these (alone or with others), while the police is responsible for 27, the Directorate of Education and Training for 3, the Directorate of Health for 1 and the Council for Road Safety for 30 of the measures targeting the road users.

The presentation of the measures targeting the road users has been structured in the following manner:

- The roles and responsibilities of road users
- Learning about traffic
- Training of drivers
- Special measures for young people
- Campaigns and information
- Monitoring and surveillance
- Penalties and sanctions
- ITS-based measures targeting road users

Examples:

- Initiate a study pertaining to various traffic violations that entail the revocation of a driving licence, including the threshold values for violations of speed limits
- Implement the campaign "Remember your seatbelt", including targeted monitoring and mass communication addressing young drivers and passengers
- Concentrate the number of sobriety tests to times and places where the risk of accidents is highest
- Compile supporting material for traffic safety training for use in schools

#### 4.2 Road improvement

Vision Zero implies that the road system should be designed in a manner that promotes appropriate behaviour and that to the largest extent possible will prevent human error from leading to serious consequences. This can be achieved through a major effort to improve the physical infrastructure in terms of investments, operation and maintenance. In addition, Vision Zero must remain a basic principle for all regional and transport planning.

The chapter on road improvement describes 46 different measures. The NPRA is committed to following up all of these, and the police is also responsible for one of them.

The presentation of the road improvement measures has been structured in the following manner:

- Large road projects
- Minor investment projects on existing roads
- Operation and maintenance
- Speed limits
- Regional and transport planning
- Events on public roads
- ITS-based measures pertaining to roads

Examples:

- Construct a central divider on 93 kilometres of two- and three-lane national roads
- Continue work on traffic safety inspections and the immediate improvement of roads where numerous accidents, or very serious accidents, occur
- Finalise work on new criteria for speed limits outside urban areas

#### 4.3 Measures targeting vehicles

The safety standards of vehicles will be of considerable importance for reaching the goals for reductions in the number of fatalities and severe injuries. Monitoring activities will seek to ensure that an increasing proportion of all vehicles comply with statutory requirements. At the same time it will be important to promote the use of new vehicle technologies that have a documented positive effect on traffic safety.

The chapter on measures targeting the vehicles describes 25 measures. The NPRA is committed to following up 24 of these, and the police is responsible for two.

The presentation of the measures targeting the vehicles is structured in the following manner:

- Vehicle inspections
- ITS-based measures pertaining to vehicles

- Measures targeting snowmobiles and all-terrain vehicles (ATVs)

Examples:

- Promote a proposal for introducing alco-locks as a requirement in all agreements with transport providers carrying out assignments for the agency
- Study the possibilities for classifying ATVs as a separate vehicle category, with special requirements to training and driving licence/documentation of driving skills
- Implement inspections in which the selection of vehicles is undertaken on the basis of automatic recognition of number plates

#### 4.4 Prevention of injury

Adequate medical emergency preparedness, in hospitals as well as outside them, will be an important contribution to Vision Zero when accidents occur. Optimal treatment could save 20-25 per cent of those who currently die from their injuries.

The chapter on prevention of injuries describes two measures. The Directorate of Health is committed to following up both of these.

The presentation is structured in the following manner:

- Requirements to medical emergency preparedness
- Contributions from the public and next-of-kin at the accident site
- Handling of accidents by the health services

Example:

- Review the regulations for the duty of physicians, psychologists and opticians to give notification of persons who fail to comply with the health requirements for a driving licence

## 5. CONTRIBUTIONS FROM THE COUNTY AUTHORITIES

### 5.1 Accidents on the county road network

On 1 January 2010, the county authorities took over ownership responsibility for a total of 17 120 kilometres of national roads from the NPRA. From that date, the county road network comprises a total of approximately 44 000 kilometres, which account for 51 per cent of the total public road network. The county authorities are thereby the largest road administrators in Norway.

Because of this reclassification of a large segment of the previous national road network into county roads in 2010, the accident statistics have changed. Previously, the proportion of fatalities and severe injuries on county roads accounted for 18 per cent of the total, but with the current county road network this proportion is now 49 per cent (cf. Figure 6 in chapter 3).

Figure 8 shows that following the new road classification only four counties have the majority of their fatalities on their national roads (Hedmark, Sogn og Fjordane, Oppland and Finnmark counties). In all other counties, with the exception of Oslo, the county authorities are currently facing the most prominent challenges. In Vestfold County, the county road network now accounts for a total of 76 per cent of the fatalities and severe injuries.

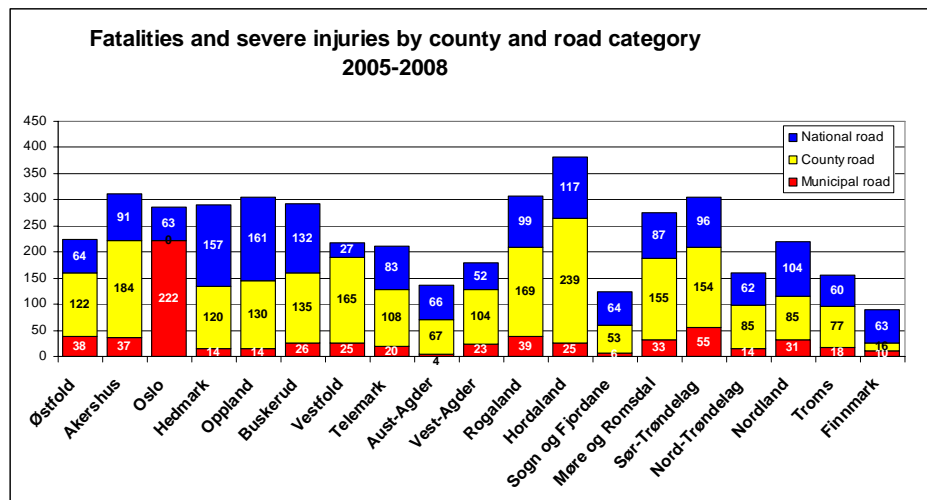


Figure 8 – Total number of fatalities and severe injuries in the period 2005-2008, based on the road classification in effect from 1 January 2010 (Source: Directorate of Public Roads)

## 5.2 Roles and responsibilities of the county authorities

Pursuant to Section 40a of the Road Traffic Act, the county authorities are responsible for proposing and coordinating efforts to improve traffic safety in the county.

The county authorities address this responsibility in various ways, in practice as well as with regard to political and administrative organisation. The county councils decide where the formal political responsibility for traffic safety should be placed – in the county council, the county executive committee, a standing committee or a separate subcommittee (e.g. the county's traffic safety committee).

Most county authorities have a separate traffic safety committee consisting of politicians and other consultative members who cannot vote but who have the right to attend the meetings, to speak and to submit proposals. Generally, the NPRA acts as the committee's secretariat. Some counties have established inter-agency administrative groups or special working groups subject to a politically appointed standing committee.

The main actors in this organisational structure, who also act as consultative committee members, are the county authorities (communication, public health, education), the NPRA, the police, the traffic police, the County Governor (health and education) and the Council for Road Safety. A small number of counties have included additional actors such as the Norwegian Driving School Association and the Norwegian Hauliers' Association as consultative members in their traffic safety committees.

The traffic safety committees have varying areas of authority. They act as advisors to the standing committees on communication, but have the authority to make decisions in some specified areas.

Following the administrative reform, some counties have initiated a review of the efforts to improve traffic safety, the organisation of these efforts and the relationship to the NPRA. Some county authorities have chosen to take a more active responsibility for improving road traffic safety in the county, and have taken over the function as secretariat for the county's traffic safety committee.

### 5.3 Priority to traffic safety in the counties' political guidelines

Being major road owners, the county authorities occupy a key position with regard to efforts to improve traffic safety. During the debate of Report no. 12 (2006-2007) to the Storting, *Regional advantages – a regional future*, the Storting emphasised the importance of ensuring an optimal level of traffic safety in all counties, cf. Recommendation no. 166 (2006-2007) to the Storting. This issue was addressed and detailed in Proposition no. 68 (2008-2009) to the Odelsting.

In this plan of action for the improvement of road traffic safety, the priorities of the county authorities have not been given the attention that this area of responsibility would indicate. The next revision of the plan of action will include intensified contact with the county authorities. The plan will then to a far larger extent incorporate local plans and efforts.

Most counties have drawn up separate plans for road traffic safety. These plans are discussed and approved by the county council or the standing committee on communications. In addition, annual plans are compiled on the basis of the plans of action. The responsibility for this planning is most often delegated to the traffic safety committee or a corresponding commission. The counties' traffic safety plans tend to follow the same planning period as the National Transport Plan.

At the time of printing this plan of action, a number of county authorities had only just initiated or were still involved in the process of drawing up new plans of action for traffic safety. Only very few have enacted a plan of action for the period 2010-2013. Others have chosen to prolong the existing plan from the period 2006-2009 in order to assess the effects of the administrative reform.

## 6. OTHER CONTRIBUTORS

The actors backing this plan of action will be responsible for the majority of the measures intended to improve traffic safety. Nevertheless, a number of other actors contribute, and in all likelihood have also contributed in the past, to the positive development that has been observed since 1970 with regard to the number of fatalities and severe injuries in road traffic accidents. Organised interest groups and the military are key contributors to national efforts to improve road traffic safety.

In the context of this plan of action, several organised interest groups have provided an overview of measures that they plan to implement during the period 2010-2013 to contribute to road traffic safety.

These organisations are:

- The Association of Importers of ATVs
- Norwegian Driving School Association

- The Association of Tyre Importers
- The Federation of Outdoor-life Associations
- The Royal Norwegian Automobile Club
- The National Association of Persons Injured in Traffic Accidents
- The Motorists' Temperance Society
- The Association of Importers of Motorcycles
- Norwegian Automobile Association
- Norwegian Hauliers' Association
- The Norwegian Motorcycle Union
- Norwegian Motorsport Association
- The Norwegian Association of Retirees
- Norwegian Taxi Owners' Association
- The Road Traffic Information Council
- Norwegian Safety Forum
- The Association of Importers of Snowmobiles
- The National Association of Cyclists
- Federation of Norwegian Transport Companies

The efforts of the military with regard to traffic safety are described in long-term plans and annual activity plans. The strategic plan of action for traffic safety 2009-2012 is the fourth in a series of long-term plans. The military has based a significant proportion of their efforts to improve traffic safety on the National Plan of Action for Road Traffic Safety 2006-2009, and have adopted Vision Zero as a basis for their long-term planning. The military has signed agreements of cooperation with the NPRA, the Council for Road Safety and the Norwegian Driving School Association. These organisations have thereby been included in the military's management group for traffic safety. The military participates in the annual conferences on traffic safety, arranged by the NPRA, the Council for Road Safety and other agencies.

A key element in the military's plan of action is to improve the quality and scope of the training of their drivers. A separate competence centre has been established in association with the military's school of transport, and a comprehensive plan for the training of drivers has been drawn up.

## **7. FOLLOW-UP**

This plan of action will be followed up in annual reports on “Efforts to improve traffic safety in Norway”. These will include reviews of the extent to which intermediate goals and indicator targets have been reached, and of whether the measures specified by the various actors have been implemented.

## **8. REFERENCES**

Statens vegvesen et. al. (2010) Nasjonal tiltaksplan for trafikksikkerhet på veg 2010-2013.