

Police enforcement and driving speed

Summary

Speed limits are violated frequently in the Netherlands. As speed is an important factor in road crashes, the surveillance of driving speeds is one of the spearheads in the policy plans of the Dutch police. Different methods of speed enforcement have proved to be effective in reducing speed and crashes. The mobile surveillance method is less effective for crash reduction, but is very suitable for apprehending persistent and prolific offenders, which is the purpose for which this method is often used. Public support for speed enforcement has increased in recent years. These days, all different methods of speed enforcement find majority support; the least public support goes to enforcement methods that are not very conspicuous.

Background and content

Speed is an important factor in road crashes (see SWOV fact sheet [The relation between speed and crashes](#)). Speed limits in the Netherlands are exceeded on a massive scale with percentages offenders varying from 20% to 40% on most road types (Van Schagen, Wegman & Roszbach, 2004). Many measures in the Sustainable Safety programme (30 km/h zones, 60 km/h zones, roundabouts) aim at reducing speed at dangerous locations. However, because measures affecting the road or the vehicle cannot always be realized in the short term, a higher level of police enforcement of speeding is a measure to increase road safety (see also SWOV fact sheet [Measures for speed management](#)). The present fact sheet will discuss the principles of speed enforcement, the legal and organisational aspects of speed enforcement, the number of speeding fines in the Netherlands, the different methods of speed enforcement and their effectiveness, and the public support for speed enforcement.

How does police enforcement work?

Police controls alongside the road determine what is known as the objective risk of being caught or the enforcement pressure. Based on this enforcement pressure and on what drivers read in newspapers or hear from friends or acquaintances, they estimate the risk of being caught when offending (i.e. the subjective risk of being caught). When drivers regard this risk as being sufficiently large, they will avoid traffic offences.

In general, the preventive effects of police enforcement are stronger if the subjective risk of being caught and the certainty of punishment are larger, if the punishment rapidly follows the offence, and if the social acceptance of usefulness and necessity of the traffic law involved (public support) is larger. Each of these elements is a link in the chain of traffic enforcement. For example, if the subjective risk of being caught is small, the penalty, certainty of being punished, and speed of punishment will not make much difference in preventing offences.

In practice the risk of being caught has only limited effect. Firstly, there also are other factors that influence speed behaviour (e.g. road features, other vehicles' speeds, unintended speeding, etc.). Secondly, for some roads drivers estimate the risk of being caught to be low. To increase the subjective risk of being caught it is important that the controls are accompanied by the necessary publicity, that they take place regularly, and are unpredictable, clearly visible and difficult to avoid.

How is speed enforcement legally regulated?

In 1992, an important legal framework for police surveillance in the Netherlands was introduced: the Administrative Enforcement of Traffic Offences Act, better known as the 'Mulder Law'. This law deals with frequent behaviour that is in violation of the legal traffic regulations. These offences are administratively settled out of court instead of there being a court case. The Mulder Law is used, for example, for offences like exceeding the speed limit by less than 30 km/h on non-motorways or less than 40 km/h on motorways. Higher speeding offences are still dealt with under criminal law: exceeding the speed limit by more than 30 (or 40) km/h is followed by a settlement proposal and possibly a summons. A driver who is apprehended for exceeding the limit by more than 50 km/h faces suspension of the driving licence.

The Mulder Law has resulted in the settlement of traffic offences being a lot quicker, more efficient, and more complete, with less work for police and the courts. This is related with the fact that the liability in Mulder Law offences lies with the owner/registration number holder of the vehicle involved instead of with the driver. This makes it possible to register offences using cameras and fine the registration number holder with the photographed number plate as evidence. It is possible to appeal, but the burden of proof lies with the registration number holder.

Together with Parliament, the Minister of Justice determines the amount of the fines. Since 1 January 2006 new rates have been set for traffic fines, based on the principle 'the more dangerous the offence, the higher the fine'. This means that the fines for red light running have been increased substantially. The rates for smaller speeding offences have been lowered, but the fines rapidly get higher with each extra kilometre over the limit. Urban speeding offenders receive a somewhat higher fine than non-urban offenders, which in turn get a higher fine than motorway offenders. The fines for exceeding the speed limit at road works are considerably higher in all cases. On 1 April 2008 the fines for Mulder offences were increased by 20%. In principle the fines are now kept in line with the development of the price level (indexing). On 1 January 2010 this amounted to a 3% increase. The revenues are added to the government's general funds.

How is speed enforcement organized in the Netherlands?

Traffic enforcement is part of the basic police task. In the Netherlands, police activities in the streets consist for one-third to two-thirds of enforcing, settling and otherwise dealing with traffic events (Goldenbeld, 2005). The enforcement of speeding is one of the spearheads of the Dutch police policy. At the regional level important decisions about traffic enforcement are made in the regular three party consultations between the mayor, the regional Chief Public Prosecutor, and the head of the police force. In addition to the regular police enforcement of traffic offences all 25 police regions have special Regional Traffic Enforcement Teams. The agreements about the enforcement efforts of the regular police force and the supplementary efforts of the Regional Traffic Enforcement Teams are laid down in a covenant for each spearhead. The agreements include the effort expressed in enforcement hours as well as the methods used. The mayor, the head of the police, the local Public Prosecutor, and a representative of the Bureau Traffic Enforcement of the Public Prosecution Service sign the covenant. The covenants are updated every other year and adapted if necessary. Assessment takes place on the basis of achieved results (crashes and offender behaviour).

How many speeding fines are imposed?

Speed enforcement has an important place in the regional enforcement plans. The aim is to use more than half the capacity (in personnel hours) for this task. The number of speeding fines within the framework of the Mulder Law has become five times higher in the 1995-2009 period (Figure 1). From 2000 onward, the use of mobile radar enforcement and of average speed checks contributed to the increase in speeding fines. Speeding offences now account for about 75% of all Mulder Law cases; in 1995 this was 50%. In 2009, 41% of a total of 9.1 million speeding fines was imposed for urban offences, 40% was for offences on motorways, and 19% on rural roads.

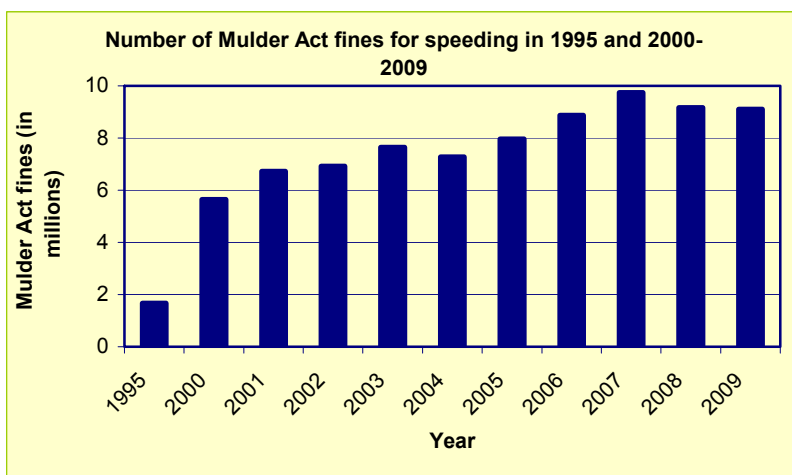


Figure 1. Source: Central Fine Collection Agency /SWOV Knowledge base.

Figure 2 shows that most of both urban and non-urban offences consisted of exceeding the speed limit by no more than 10 km/h. This means exceeding the legally determined offence limit. This offence limit takes account of a tolerance level and is determined as follows:

- Everybody gets a deduction to correct for the maximum measurement error of the instrument. The deduction is 3 km/h below 100 km/h, and 4 km/h above.
- On 80 km/h roads, the instruments are tuned at 87 km/h and on 100 km/h roads at 108 km/h. A speed lower than 87 or 108 km/h is not registered as an offence.

An offence in the category 0-5 km/h over the limit on 80 km/h roads is therefore always a corrected speed that, with a 100% certainty, was at least a driven speed of 84 or 85 km/h (measured speed of 87 or 88 km/h). Offences in the category 6-10 km/h over the limit are corrected speeds of 86 to 90 km/h (measured speeds of at least 89-93 km/h).

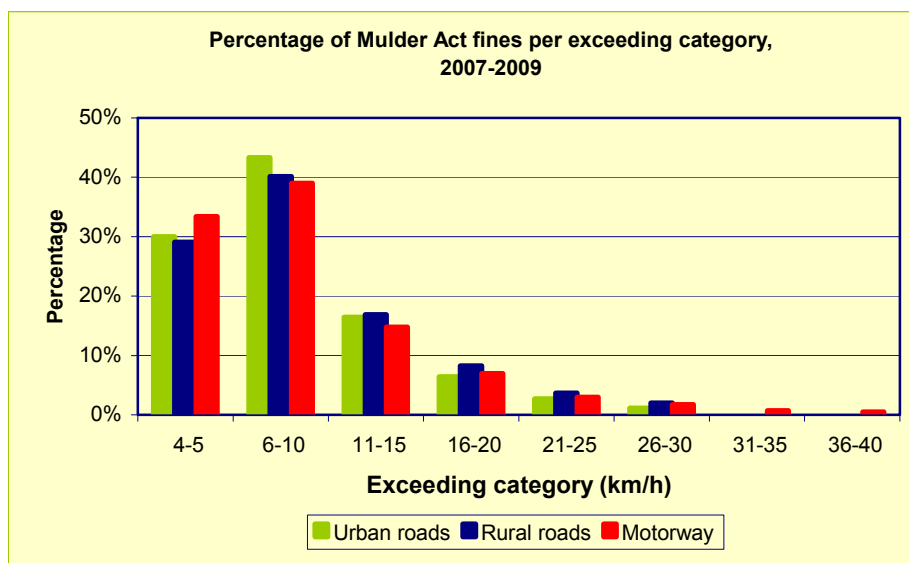


Figure 2. Source: Central Fine Collection Agency / SWOV Knowledge base.

Where are speed checks held?

The speed checks that are carried out by the Regional Traffic Enforcement Teams usually take place on roads that meet three subsequent criteria: 1) a relatively large number of crashes, 2) a clear or at least plausible link between crashes and speed, and 3) a relatively high percentage of speed offenders. A relatively large number of crashes on a road section does not necessarily indicate a high crash rate (number of crashes per vehicle kilometres); it may just be a busy road. Since 2005, the Regional Traffic Enforcement Teams have consistently paid attention to subjective safety. Citizens' complaints are the starting point for further investigation of local safety problems. The website www.verkeershandhaving.nl contains more information (a small part in English); see also SWOV Fact sheet [Subjective safety in traffic](#).

How effective are the various methods of traffic enforcement?

Four main speed surveillance methods are used in the Netherlands:

- automatic speed checks using fixed or mobile speed cameras, not apprehending offenders;
- mobile speed checks with apprehending offenders;
- mobile surveillances and apprehending speed offenders;
- average speed checks in which the average speed of all passing vehicles along a particular road section is determined (also known as section controls).

Much research has been done into the safety effects of speed cameras. Although nearly all studies are characterized by methodological shortcomings, they generally show a consistently positive picture. Three recent international surveys report that speed cameras reduces the number of injury crashes at road sections where they are placed by about 20%. Research indicates positive effects on speed behaviour and road safety also for the Netherlands. More information can be found in SWOV Fact sheet [Speed cameras: how they work and what effect they have](#)

Mobile or fixed speed checks with apprehending offenders have also demonstrated to be effective in reducing crashes (Erke, Goldenbeld & Vaa, 2009). Literature studies have established that mobile surveillance with apprehending offenders is the least effective method to reduce road crashes (Elvik et al., 2009). This method is not noticeable or conspicuous enough to have a general preventive effect. However, the method is very suitable for the purpose of specifically catching persistent big offenders, the purpose for which it is mostly used in the Netherlands.

Average speed checks can considerably increase the distance on which control has an effect, meaning that controls have a more sustainable behavioural effect (Goldenbeld, 2005). The initial technical problem (being able to identify number plates) has been reduced by improved digital camera equipment and by number plate recognition software. The enforcement of a new 80 km/h speed limit on part of the A13 motorway between Rotterdam and Delft which was started in 2001 is carried out by automatic road section checks with digital cameras. This reduced the percentage of offenders to less than 1% (RWS, 2003). In Austria positive effects of the average speed check were found, in speed reduction as well as in the number of crashes (Stefan, 2006).

What do the Dutch think of speed enforcement?

A repeated survey among more than 6,000 people in the Netherlands shows that there is a fair amount of support in the Netherlands for various kinds of enforcement, including speed enforcement (Table 1).

	2003	2004	2005	2006	2007	2008
Speed enforcement in general	71.7	73.7	75.7	81.9	84.9	86.4
Alcohol enforcement	98.9	98.6	98.7	99.0	99.0	98.5
Seat belt enforcement	80.5	80.6	82.9	83.3	83.2	82.7
Red light running enforcement	94.0	94.1	94.1	95.1	95.3	95.1

Table 1. *Percentage of respondents that consider certain enforcement activities to be meaningful (Poppeliers et al., 2009).*

Public support for speed checks has been increasing in recent years. In 2003 just over 70% found speed checks meaningful; in 2008 this percentage had increased to 85%. The perception study also shows which types of speed check were acceptable to citizens to a greater or lesser extent (Table 2). Especially the use of inconspicuous speed control equipment and the use of the laser gun which perhaps is also regarded as an inconspicuous instrument are found less acceptable.

	2003	2004	2005	2006	2007	2008
Fixed camera	67.7	67.0	67.5	66.5	72.3	79.7
Apprehension	78.8	80.0	77.2	77.6	79.5	85.6
Laser gun	45.1	47.6	47.5	47.7	50.2	57.4
Inconspicuous position police car	46.5	48.1	45.3	46.1	50.8	58.4
Video car	65.0	68.0	65.7	65.8	70.2	76.2
Average speed check	65.9	68.7	70.4	68.8	72.3	76.5

Table 2. *Percentage of respondents that find specific types of speed checks (very) acceptable (Poppeliers et al., 2009).*

Which measures can support speed enforcement?

Studies (Erke, Goldenbeld & Vaa, 2009; Van Schagen, Wegman, & Roszbach, 2004) indicate that speed enforcement is more effective when:

- it explicitly concentrates on sections or locations with a speed related safety problem.
- it focuses more on average speed checks, the most effective type of speed check over longer distances.

- the enforcement activities are clearly visible along the roadside (e.g. by warning signs) and the purpose – road safety – is clear.

Conclusions

Speed plays an important role in road crashes. Speed limits are often exceeded and on a number of roads speeding results in above average crash rates. Different methods of speed enforcement have proved to be successful in reducing speed and crashes. Mobile surveillance is the least effective method, but, on the other hand, is very suitable for catching persistent, heavy offenders. Although citizens often criticize speed enforcement, public support has indeed grown in recent years. All methods of speed enforcement have majority support these days; the methods that are not clearly visible get the least support

Publications and sources

(SWOV reports in Dutch have an English summary)

Elvik, R., Høye, A., Vaa, T. & Sørensen, M. (2009). [*The handbook of road safety measures*](#). Second revised edition. Emerald Group Publishing, Bingley, United Kingdom.

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