

**Summary:**

# **Prospects for improving road safety in Norway**

This report presents a road safety impact assessment for Norway, designed to assess the prospects for improving road safety. The report is to a large extent based on work done as part of the development of the National Transport Plan for the 2010-2019 planning term. The report is also part of work package 2 of the EU-project RIPCORDER-ISEREST.

A broad survey of potentially effective road safety measures has been performed. A total of 139 road safety measures were surveyed; 45 of these were included in a formal impact assessment, which also included cost-benefit analyses. The other 94 road safety measures were for various reasons not included in the impact assessment. Reasons for exclusion comprise: (1) Effects of the measure are unknown or too poorly known to support a formal impact assessment; (2) The measure does not improve road safety; (3) The measure has been fully implemented in Norway; (4) The measure overlaps another measure; to prevent double counting, only one measure was included; (5) The measure is analytically intractable.

For the 45 road safety measures included in the impact assessment, use of these measures during the period until 2020 was considered. Analyses indicate that 39 of the 45 measures are cost-effective, i.e. their benefits are greater than the costs according to cost-benefit analyses. Six of the measures were not cost-effective.

A preliminary target of halving the number of road accident fatalities and the number of road users seriously injured has been set in the National Transport Plan for the term 2010-2019. This plan is as yet not finally developed and the road safety target proposed has not been officially adopted or given political support. It is nevertheless of interest to examine if such a target can be realised, as previous road safety impact assessments in Norway have indicated that it is possible to drastically reduce the number of fatalities and injuries. The preliminary targets in the National Transport Plan call for a reduction of fatalities from 250 (annual mean 2003-2006) to 125 in 2020. The number of seriously injured road users is to be reduced from 980 (mean 2003-2006) to 490.

The range of options for improving road safety has been described in terms of four main policy options, all of which apply to the period from 2007 to 2020:

1. Optimal use of road safety measures: All road safety measures are used up to the point at which marginal benefits equal marginal costs. The surplus of benefits over costs will then be maximised.
2. "National" optimal use of road safety measures: Not all road safety measures are under the control of the Norwegian government; in particular

new motor vehicle safety standards are adopted by international bodies. A version of optimal use of road safety measures confined to those that can be controlled domestically was therefore developed.

3. Continuing present policies. This option essentially means that road safety measures continue to be applied as they currently are. There will not be any increase in police enforcement, nor will new laws be introduced (e.g. a law requiring bicycle helmets to be worn).
4. Strengthening present policies. In this option, those road safety measures that it is cost-effective to use more extensively, are used more extensively than today. In particular, this implies a drastic increase in police enforcement.

Estimates show that all these policy options can be expected to improve road safety in Norway. The largest reduction in the number of killed or injured road users is obtained by implementing policy option 1, optimal use of road safety measures. Full implementation of this policy option results in a predicted number of fatalities of 138 in 2020. The predicted number of seriously injured road users is 652. These numbers clearly exceed the targets of, respectively, 125 and 490, although for the number of fatalities the discrepancy is well within the range of normal random variation. The Public Roads Administration has, based on its own analyses, concluded that it is in principle possible to reduce the number of killed or seriously injured road users by 50 % in 2020.

It is, however, not realistic to expect road safety measures to be used optimally. In the first place, some of the measures that may improve road safety if used optimally are outside the power of the Norwegian government. This applies to new motor vehicle safety standards. In the second place, for some road safety measures, optimal use implies a drastic increase. This applies to police enforcement. It is, however, unlikely that the police will increase traffic law enforcement to the optimal extent. In the third place, optimal use of road related road safety measures requires a maximally efficient selection of sites for treatment. Current selection of sites for treatment is not maximally efficient. A strictly optimal selection of sites for treatment is not easily accomplished in Norway due to resource allocation mechanisms favouring regional balancing, rather than economic efficiency.

A more realistic policy is therefore that road safety measures continue to be used along roughly the same lines as they are today. Such a policy will not bring about large improvements in road safety in Norway. A conservative estimate for the number of road accident fatalities in 2020 is about 200. A corresponding estimate for seriously injured road users is about 850. While both these numbers are lower than the current numbers, they are a long way from realising the targets set for 2020 (125 road users killed, 490 seriously injured).

It should be stressed that the estimates presented in this report are highly uncertain. It would therefore not be surprising if the actual development turns out to be different from the one estimated.