

Summary:

Road Safety Measures: A Catalogue of Estimated Effects

This report contains a catalogue of estimates of the effects on road safety of selected road safety measures. The report is intended for use as a reference manual in drafting the Norwegian National Transport Plan for 2010-2019, and in the planning of road safety measures. It focuses mainly on measures within the responsibility of the Public Roads Administration. The first three chapters of this report contain an introduction, a section on injury severity classification, and an overview of all measures dealt with in the catalogue.

In chapter 4, we present **a detailed inventory of current effect estimates for road safety measures**. Most of the effect estimates are taken from the Handbook of Road Safety Measures, but many estimates have been updated on the basis of new studies. Effects are expressed in terms of reductions in the number of people killed, severely injured, or slightly injured, and when information allows also in terms of property damage accidents. This reflects a shift of emphasis towards the prevention of fatal and serious injuries, brought about by the adoption of Vision Zero as the official long-term ideal of road safety policy in Norway. The uncertainty associated with the estimates is indicated by confidence intervals and by quality ratings for the studies underlying the estimates. The quality ratings take into account to what degree the estimates may be affected by regression to the mean or by other methodological weaknesses. The effect estimates are the basis for detailed analysis of certain, specific road safety projects. A method for doing such analyses is described.

In chapter 5, we present **an analysis of the cost-effectiveness and the benefit-cost ratio of road safety**. Cost-effectiveness is expressed in terms of prevented fatalities or injuries per million NOK cost of implementing the measure. Cost-effectiveness is calculated for safety measures within the authority of the Public Roads Administration. This includes road and vehicle measures as well as measures aiming at specific groups of road users. The cost-effectiveness is calculated for various levels traffic density. The results are being used in strategic planning and budgeting of road safety. In order to use the tables with cost-effectiveness data, the user needs information about the budget, traffic volume, the number of relevant sites or kilometres, and the type of accidents to be reduced. In the cost-benefit analyses, effects on mobility and environment are included in addition to safety effects.

Guidelines for the use of effect estimates in road safety planning are summarized in chapter 6. This includes planning at the more general, strategic level, as well as the detailed planning connected to the use of specific measures. The main question answered in this part is how the number of fatalities or injuries in road traffic can be affected by single road safety measures or by combinations of several safety measures.