

January 2018

Road infrastructure and tunnel safety

Directive 2008/96/EC on road infrastructure safety management and Directive 2004/54/EC on minimum safety requirements for tunnels in the trans-European road network

This briefing is one in a series of 'Implementation appraisals', produced by the European Parliamentary Research Service (EPRS), on the operation of existing EU legislation in practice. Each such briefing focuses on a specific EU law, which is likely to be amended or reviewed, as foreseen in the European Commission's annual work programme. 'Implementation appraisals' aim at providing a succinct overview of publicly available material on the implementation, application and effectiveness to date of an EU law, drawing on input from EU institutions and bodies, as well as external organisations. 'Implementation appraisals' are provided by the EPRS Ex-Post Evaluation Unit, to assist parliamentary committees in their consideration of new European Commission proposals, once tabled.

Summary

In 2010, the European Commission adopted the road safety programme, aimed at reducing road deaths in Europe by half in the following decade. Through its strategic objectives,¹ the programme focuses on three main issues: vehicle safety, the infrastructure safety, and road users' behaviour. The initiatives undertaken within the road safety programme refer to both EU and national level.

In its efforts to improve road safety, the European Union is considering new measures and activities, as well as reviewing existing legislation. In this context, the European Commission decided to assess two pieces of legislation dealing with road infrastructure and tunnel safety issues: Directive 2008/96/EC and Directive 2004/54/EC, with a view to analysing whether they are still fit for current realities and needs.

Directive 2008/96/EC requests Member States to put in place and implement 'procedures relating to road safety impact assessments, road safety audits, the management of road network safety and safety inspections' (Article 1), while Directive 2004/54/EC aims at ensuring 'a minimum level of safety for road users in tunnels in the trans-European road network' (Article 1).

This implementation appraisal focuses on the evaluation of the two directives, a process that precedes the European Commission's new proposal, expected early this year.

1. Background

EU legislation sets out specific safety requirements for road infrastructure and tunnels through [Directive 2008/96](#) and [Directive 2004/54](#) respectively. In terms of scope, the two directives apply to the roads and tunnels of the [trans-European transport network](#) (TEN-T), with a view to ensuring that a uniform approach to safety management is applied to all parts of the network.

¹ Improved safety measures for vehicles, building safer road infrastructure, boost smart technology, strengthening education and training for road users, better enforcement, establishing a road injuries target, a new focus on motorcyclists.

Directive 2008/96 details specific procedures covering all TEN-T infrastructure life-stages, such as planning, development, and management.

Table 1: Overview of road safety procedures under Directive 2008/96 (Article 2)

Procedure	Description	Stage of application	Type of road
Road safety impact assessment	Strategic comparative analysis of the impact of a new road or a substantial modification to the existing network on the safety performance of the road network	Initial planning stage before the project is approved	New roads
Road safety audit	Independent, detailed, systematic and technical safety check relating to the design characteristics of a road infrastructure project and covering all stages from planning to early operation	Design, construction and early operation	New roads
Road safety inspection	Ordinary periodic verification of the characteristics and defects requiring maintenance work for reasons of safety	Operational stage	Existing roads
Network safety management	Consists of ranking of high accident concentration sections , which have been in operation for more than three years and where a large number of fatal accidents in proportion to the traffic flow have occurred; and network safety ranking for parts of the existing road network according to their potential for safety development and accident cost savings.	Operational stage, at least every three years	Existing roads

Source: Authors' elaboration on Gerlach (2012) in [Ex-post Evaluation 2014](#).

Directive 2004/54 addresses the specific safety concerns of long road tunnels (i.e. those longer than 500 metres) by setting minimum organisational and infrastructure requirements. Fires and accidents in such tunnels have repeatedly shown how rapidly user safety is jeopardised in the event of an accident; a situation that is further aggravated by increase in traffic volumes and ageing infrastructure in some parts of the network.

In addition, one of the key objectives outlined in the 2011 white paper on transport² is to 'move closer to zero fatalities in road transport by 2050', with the intermediate goal of halving the number of fatalities by 2020.³ These objectives require, among other things, a revision of existing legislation to ensure that it is still fit for purpose and reflects the current state of road transport, the quality of existing infrastructure and relevant technological developments. This revision would also tackle other important issues, including the persistently high number of severe road injuries, and improve the safety of vulnerable road users such as pedestrians and cyclists.⁴ Fatalities among the latter decreased less than for other road users.

² Roadmap to a single European transport area – Towards a competitive and resource efficient transport system, COM (2011) 0144.

³ The [latest available figures](#) indicate that there were 25 500 road fatalities in 2016, representing a 19 % reduction since 2010. As a result, the goal of halving the fatalities by 2020 remains challenging. In addition, disparities between Member States remain. Another central problem is the persistently high number of severe road injuries (135 000 in 2015) and their social and economic impacts. For further details, see also the [Community Road Accident Database](#) (CARE) and the [European Road Safety Observatory](#) (ERSO).

⁴ See also European Commission communication [Towards a European road safety area: policy orientations on road safety 2011-2020](#), COM(2011) 389.

2. EU-level reports, evaluations and studies/European Commission implementation reports

[Annex 2](#) of the [Commission work programme 2017](#) announced the revision of the two directives as part of the Regulatory Fitness and Performance Programme (REFIT). Two evaluations to that effect were completed in 2015 and complement the mid-term review of the EU road safety policy framework 2011-2020.⁵

[Commission Staff Working Document \(SWD\) on the interim evaluation of the EU safety policy framework 2011-2020 – June 2015](#)

The Commission recalled that road safety is a shared competence between the EU and the Member States. Therefore, reaching strategic targets requires combined action at all levels of government, from EU to local. EU initiatives in this field are organised around seven focus areas: education and training of road users; enforcement of road traffic rules; improving the safety of road infrastructure; improving the use of modern safety technologies; safer vehicles; serious injuries and emergency services; and the safety of vulnerable road users.⁶ While the SWD highlighted progress achieved in each of these seven areas, it also indicated that specific action was still needed, for example, to reduce the relatively slow decrease in number of serious road traffic injuries, compared to fatalities.

The intermediate target of halving the number of fatalities by 2020 remains challenging but attainable, if additional efforts are deployed at both EU and national levels. Based on the results of two external evaluations (presented below), the Commission SWD concluded that the overall objectives and targets of the EU road safety policy framework remain relevant. It highlighted however that the generally higher representation of men among road fatalities⁷ is not currently the target of any specific action within the framework. The SWD also confirmed the effectiveness of the current framework, which has led to a 'significant impact on road safety'.⁸ In this respect, a direct link between some of the actions and road safety achievements could sometimes be established; in other instances and for specific target groups or road types, the connection was less clear and remained difficult to measure. While the external evaluations could not obtain a precise figure on cost savings generated by the measures evaluated, they found that the annual cost savings achieved outweighed the total annual expenditure on road safety. The SWD also confirmed the overall coherence of EU road safety legislation with other policy objectives: only three areas were found to be slightly problematic in terms of coherence; however, the problems identified were deemed solvable under the current framework.⁹ The analysis confirmed the EU added value of the current framework, as progress in Member States with lower levels of road safety would likely have been slower without the EU's contribution. As regards future developments, there appeared to be no need for major changes in the overall road safety strategy and planned actions ought to be completed. The SWD noted however that the next strategy could potentially address two elements: the overrepresentation of males among road fatalities, and identifying some intermediary outcome objectives on the way to reaching overall strategic targets.

⁵ A complete overview of EU road safety policy is available [here](#). For further details, see also the [Road safety study for the interim evaluation of policy orientations on road safety 2011-2020](#) – final report of February 2015, and in particular section 4.5.

⁶ SWD(2015) 116, p. 3- 4.

⁷ Note that fatalities are also more widespread among people aged between 15 and 25; however, fatalities among young drivers have decreased.

⁸ SWD(2015) 116, p. 5.

⁹ SWD(2015) 116, p. 5-6. These areas were the potential incompatibility between strong economic development leading to increased traffic volumes and the desired fatality reduction targets; the conflict between increasing low-speed zones and fuel consumption and emission targets; and a potential increase in safety risks for vulnerable road users following the promotion of sustainable transport, in the absence of additional measures to protect those users.

Study on the implementation and effects of Directive 2004/54/EC on minimum safety requirements for road tunnels in the Trans-European Road Network – Final report of June 2015

In 2015, an external study commissioned by the European Commission assessed the implementation of Directive 2004/54/EC by the Member States. This mid-term analysis focused on:

- the evaluation of the progress made on road tunnel safety (obtained by preventing critical events with consequences for human life, the environment and tunnel installation, with the adoption of a harmonised risk method);
- the implementation of the directive by the Member States in terms of scope, administrative provisions and technical requirements, as well as the results, consequences and impacts of this implementation;
- cost-benefit assessment;
- best practice across Member States.

The study also assessed the implementation of the directive against the standard set of criteria for evaluation: relevance, coherence, effectiveness, efficiency, sustainability and EU added value.

The conclusions of the study listed an important number of positive outcomes and impacts, such as the positive effect of raising awareness of the issue of tunnel safety; the strengthening of safety-orientated systems and tunnel infrastructure; and the improvement in capacity to manage dangerous events, and to prevent and mitigate the effects of accidents and fires. The study also described the directive 'as an internationally recognised standard for regulation in this field since it guarantees that minimum safety levels are met'.¹⁰ At the same time, it was pointed out that 'the objectives of Directive 2004/54/EC are not yet fully achieved, principally because many tunnels have not yet been upgraded to the point where they meet its requirements. The tunnel refurbishment programme in some countries is far from complete. The work required is greatest in the countries with a comparatively high number of tunnels. Achieving full compliance in the remaining time available will require a very significant effort and investment'.¹¹

Study on the effectiveness and on the improvement of the EU legislative framework on road infrastructure safety – Ex post evaluation – Final report of December 2014

After five years of implementation, the European Commission requested a study evaluating the functioning of Directive 2008/96 and investigating the opportunity to introduce a series of amendments to reflect new technological developments.¹² The analysis built on eight criteria (implementation, relevance, effectiveness, sustainability, coherence, utility, efficiency, and EU added value),¹³ to establish the impacts of the legislation on its target beneficiaries.

The study found that the diffusion of road safety infrastructure management (RISM) procedures across the EU has been one of the tangible benefits of Directive 2008/96. This piece of legislation also triggered greater awareness and better operational processes at Member State level, which would not have taken place without the directive. In addition, it facilitated the development of a 'common language' in dealing with road safety. Overall, these elements highlight the EU added value of the directive.

The study found that the directive was transposed with no particular problems in the EU28. It even acted as a boost to road traffic safety in countries with a lower road safety track record. However, the evaluation also indicated that in certain countries, discrepancies between formal adoption and actual implementation persist. The changes to national RISM procedures prompted by the directive were expected to last in the long term (sustainability). The study also indicated that the directive's objectives are still relevant, although

¹⁰ European Commission, Study on the implementation and effects of Directive 2004/54/EC on minimum safety requirements for road tunnels in the trans-European road network, 2015, p.80.

¹¹ European Commission, Study on the implementation and effects of Directive 2004/54/EC on minimum safety requirements for road tunnels in the trans-European road network, 2015, p.80.

¹² This briefing focuses on the ex-post evaluation only. The report dedicated to potential changes to the directive is available on the [Commission website](#).

¹³ See pages 25-26 for the complete list of evaluation questions.

additional benefits could be achieved by being more prescriptive. By way of example, the current text does not include detailed guidance on how to apply RISM procedures. This has led to an uneven application across the EU: procedures have been poorly understood in some cases, or simply interpreted differently.

The analysis confirmed the usefulness of the directive, as it contributed to a reduction in road fatality rates, directly attributable to the implementation of the legislation. While the directive was also deemed effective, it did not bring about a clear increase in the exchange of best practices as originally expected. Impacts in terms of the cross-border mobility of road safety professionals were also limited. As Member States do not collect data on the costs and benefits of applying road safety procedures, the evaluators could not provide a detailed assessment of efficiency. In addition, too little time had passed between the application of the directive and the date of the evaluation to draw definite conclusions. However, the study indicated that the visible reduction in road traffic fatalities and injuries (and the related costs to society) mentioned above could be considered a tangible benefit for the costs incurred in implementing the directive.

The current scope of the directive was identified as an area in need of improvement: indeed, the TEN-T network represents only a portion of the roads in the Member States, often the less problematic ones in terms of fatalities and road accidents. While various countries chose to apply the Directive to other roads, national approaches are not uniform across the EU. Another element worthy of attention was the limited quality and quantity of relevant data. Indeed, the directive does not include provisions on data collection. According to the study, this point should be addressed to better evaluate, and if necessary amend, the directive in the future.

3. European Parliament position

3.1 Resolutions of the European Parliament

European Parliament [resolution of 18 May 2017 on road transport in the European Union](#)

The European Parliament stressed the importance of taking the necessary steps to achieve the goal of halving the number of fatalities and serious injuries by 2020, and expressed its support for the Commission's impact assessment to review the existing legislation. It also highlighted the persistent difference in the enforcement of existing legislation across the EU, which has, among other things, also a clear impact on road safety records.

European Parliament [resolution of 9 September 2015 on the implementation of the 2011 white paper on transport: taking stock and the way towards sustainable mobility](#)

The European Parliament referred several times to road safety, highlighting that although significant progress had been made, differences among Member States persist and new measures are needed: 'road safety goes hand in hand with respectful behaviour by all road users, and that education in families and schools should play a greater role in achieving' safety objectives.

The European Parliament called for further measures to achieve the 2020 target of a 40 % reduction in the number of people seriously injured. In this regard, it was suggested 'the extension, within the revision of Directive 2008/96/EC on road infrastructure safety management, of its four main measures to other parts of the road network, including all parts of motorways and rural and urban roads'.

3.2 Written questions by MEPs

Members of the European Parliament have addressed, in writing or orally, several questions to the European Commission on road infrastructure and tunnel safety. This section provides a selection of relevant questions by Members from the current parliamentary term.

[Written question by Ruža Tomašić \(ECR, Croatia\)](#), 4 July 2017

The Member asked the European Commission whether specific measures are envisaged at European level that would reduce the likelihood of road deaths in those Member States that have a high fatality rate in traffic.

[Answer given by Violeta Bulc on behalf of the Commission](#), 20 September 2017

The Commissioner explained that the measures taken at European level were intended to improve road safety in all Member States, but in particular in those with poor road safety results. Commissioner Bulc highlighted measures that have already contributed to reducing the gap in Member States' road safety performance, such as the promotion of national action plans, the exchange of best practices, and analyses and comparisons of country road safety performances. At the same time, the Commissioner expressed hope that the further introduction of driver assistance and (cooperative) intelligent transport systems will also contribute to decreasing the number of road accidents.

[Written question by Pavel Telička \(ALDE, Czech Republic\)](#), 4 August 2015

The Member asked the European Commission how it intends to integrate tunnel safety issues into its future legislative plans.

[Answer given by Violeta Bulc on behalf of the Commission](#), 26 October 2015

The Commissioner referred to the assessment of the existing legislation within the Regulatory Fitness and Performance (REFIT) programme, with a view to evaluating how it can be improved. In this context, Commissioner Bulc explained that the possible revision of the current legislation would consider the management of road infrastructure safety from a more comprehensive perspective, by integrating the specific tunnel aspects with the general road infrastructure management approach established by Directive 2008/96/EC on road infrastructure safety management.

[Written question by Angelo Ciocca \(ENF, Italy\)](#), 3 February 2017

The Member asked the European Commission about the real benefits of the European road safety programme (2011-2020) for Italy, as the measures under the programme appear, compared to statistical data, to be a vision for the future rather than a reality.

[Answer given by Violeta Bulc on behalf of the Commission](#), 18 April 2017

The Commissioner recalled that the programmes and measures at EU level contribute to road safety improvements in all EU countries and, as a result, gaps in the Member States' relative road safety performances are continuously diminishing. As for Italy, the statistical data shows that Italy reduced the number of road deaths by 42 % between 2001 and 2010 (the EU average was 45 % less), and further reduced road deaths by 17 % between 2010 and 2015 (the same as the EU average of 17 %).

[Written question by Aldo Patriciello \(EPP, Italy\)](#), 5 December 2016

The Member asked the European Commission about the possibility of adopting further instruments to pursue its goal of halving the number of road deaths in the Member States between 2010 and 2020 more effectively.

[Answer given by Violeta Bulc on behalf of the Commission](#), 1 March 2017

The Commissioner explained that several measures were taken at European level to promote road safety. On the one hand, the Commission enhanced the legislative framework and increased the number of European initiatives, and, on the other hand, supports Member States in their activities to improve road safety. Commissioner Bulc also pointed out that road safety requires shared responsibility between EU and Member States.

[Written question by Hugues Bayet \(S&D, Belgium\)](#), 21 May 2015

The Member asked the Commission about its intention to modify Directive 2008/96/EC based on the findings of an external study commissioned by the institution in 2015 and its recommendations to strengthen the current legislation.

[Answer given by Violeta Bulc on behalf of the Commission](#), 28 July 2015

The Commissioner informed the Member that two studies were commissioned to assess two pieces of legislation: Directive 2008/96/EC and Directive 2004/54/EC. Based on the conclusions of the studies, analysis was due for delivery at the end of 2015. Nevertheless, a proposal for revision would have to be supported by the positive results of a formal Commission impact assessment.

4. European Commission public consultation

In light of a forthcoming review of road infrastructure and tunnel safety legislation, the European Commission held a [public online consultation](#) between June and September 2017. From a preliminary analysis of the unprocessed [answers to the consultation](#) published on the Commission's website, it appears that the first part of the questionnaire on the characteristics of the respondents was left incomplete by a considerable number of stakeholders. It is thus difficult to draw specific conclusions on the overall results of the consultation without further input (e.g. the synopsis report prepared by the European Commission for each consultation, not yet available at the time of writing).

5. Other sources of reference

[Road transport: harmonisation of legislation](#), Fact sheet, European Parliament, October 2016.

[Common transport policy: overview](#), Fact sheet, European Parliament, October 2016.

[Road Safety Programme 2011-2020: detailed measures](#), press release, European Commission, 20 July 2010.

Table: Directive 2008/96/EC and Directive 2004/54/EC – additional information

EP committee responsible at the time of adoption of the EU legislation: Committee on Transport and Tourism
Date of adoption of original legislation in plenary: <ul style="list-style-type: none">- 20 April 2004 (Directive 2004/54/EC)- 19 June 2008 (Directive 2008/96/EC)
Deadline for transposition of legislation: <ul style="list-style-type: none">- 30 April 2006 (Article 18(1), Directive 2004/54/EC)- 19 December 2010 (Article 14(1), Directive 2008/54/EC)
Planned date for review of legislation: <ul style="list-style-type: none">- Neither Directive 2004/54/EC nor Directive 2008/96/EC envisage a review of their application by the Member States. Directive 2004/54/EC however includes a reporting clause for Member States on accidents affecting the safety of road users in tunnels (Article 15).¹⁴
Timeline for new amending legislation: The revision of Directive 2004/54/EC and 2008/96/EC was announced in Annex 2 (REFIT) of the Commission work programme 2017 . The inception impact assessment of June 2017 indicates the first quarter of 2018 as the possible date of publication of the proposal.

To contact the Ex-Post Evaluation Unit, please e-mail: EPRS-ExPostEvaluation@ep.europa.eu

Manuscript completed in January 2018. Brussels © European Union, 2018.

This document is prepared for, and addressed to, the Members and staff of the European Parliament as background material to assist them in their parliamentary work. The content of the document is the sole responsibility of its author(s) and any opinions expressed herein should not be taken to represent an official position of the Parliament. Reproduction and translation for non-commercial purposes are authorised, provided the source is acknowledged and the European Parliament is given prior notice and sent a copy.

www.europarl.europa.eu/thinktank (Internet) – www.eptthinktank.eu (blog) – www.eprs.sso.ep.parl.union.eu (Intranet)

¹⁴ The Member States are obliged to provide these reports every two years to the Commission; the latter has to 'make the reports available to all Member States'.