

STAFF WORKING DOCUMENT OF THE SERVICES

Annex to the Proposal for a Directive of the European Parliament and of the Council on road infrastructure safety management

Executive Summary of the Impact Assessment

PROBLEM DEFINITION

In 2001 the European Union set itself the ambitious objective of halving the number of fatalities on European roads by 2010 (from 50 000 to 25 000). While progress is being made (see Mid Term Review of the 2003 Road Safety Action Plan¹), road accidents have still caused 41 500 victims on EU roads in 2005.

The direct measurable costs of this large number of road accidents were estimated in the RSAP to be 45 billion € per year. The indirect costs, which include physical and psychological damage suffered by victims, are estimated to be up to four times higher.

The following specific problems are considered by the Directive:

- (1) While the general trend is to decrease budgets for road infrastructure, road users pay more attention to the quality and level of safety of roads. Road authorities have to provide an infrastructure corresponding to the latest state of safety under budgetary constraints.
- (2) Present road designs result from many decades of construction and maintenance, in a time when safety issues were not always considered to the same extent. Moreover, traffic conditions may have changed since the road was designed and built.
- (3) Existing road infrastructure is often not managed according to the best available know-how of safety engineering. This has shown to contribute to unacceptably high numbers of fatal accidents on specific stretches of road.
- (4) While designing roads, safety is often implicitly assumed to be achieved by simply adhering to prescribed standards of alignment and layout. But, abiding by those standards is often not sufficient to avoid hazardous features.
- (5) Some 60% of accident fatalities occur on roads outside built-up areas. The need to build new roads or upgrade existing trunk roads is imminent, especially in Central and Eastern Europe where best use of the EU-15 experience should be made.

OBJECTIVES

The European Commission announced its decision to take concrete action on road infrastructure safety in its White Paper on European Transport Policy for 2010² and in its Communication on a European Road Safety Action Programme of 2 June 2003. The European Parliament invited the Commission to provide guidelines for high-risk spot

¹ Commission Communication of 22 February 2006: "Mid Term Review of the 2003 Road Safety Action Plan", COM(2006) 74

² Commission White Paper of 12 September 2001: "European transport policy for 2010: time to decide", COM (2001) 370

management and road safety audits³. Member States called for a high level of safety on roads in the Trans-European Network Guidelines of 1996⁴.

The objective of this Directive is therefore to ensure that safety is integrated in all phases of planning, design and operation of road infrastructure. It will ensure that safety is regarded in its own right and separately from economic and environmental analysis.

Main objectives will be:

- (1) To provide road authorities with the instruments necessary to strengthen safety, to make safety implications of decisions more transparent and to optimise use of limited funds for more efficient construction and maintenance roads;
- (2) To increase the safety of new roads through continuous adaptation to the latest safety requirements;
- (3) To bring about a common high level of safety of roads in all EU Member States;
- (4) To create safety awareness in order to achieve informed decisions on planning and design;
- (5) To establish a constant exchange of best practice; to allow the collection and the distribution of the available expertise in order to exploit research results.

CONSULTATION OF INTERESTED PARTIES

In order to provide for expert input at an early stage and with regard to transparency policy, the Commission established a **Working group on infrastructure safety** in 2002. 11 Member States participated in this Group⁵ and gave detailed advice on practices in their countries on road infrastructure safety procedures. The results of this working group reveal a widespread deficit of feedback concerning the effectiveness of the management systems, which makes any improvement on a “best practice” basis improbable.

Road safety activities were put very high on the agenda of the Austrian EU Presidency in the first semester of 2006. To deal with infrastructure safety related subjects a **High Level Expert Meeting on “Infrastructure Safety”** was organised in Vienna on 24-25 January 2006. In preparation of this meeting a questionnaire on road safety related issues and instruments was sent out to the invited countries. The results of this survey were collected in a report⁶ showing the level of diffusion of the proposed instruments in the different European countries. The following table summarises in which of the 25 Member States the instruments are in use.

³ European Parliament Resolution A5-0381/2000 of 18 January 2001

⁴ European Parliament and Council Decision 1692/96/EC of 23 July 1996 on Community guidelines for the development of the Trans-European network, O.J. L 228 of 9 September 1996, Art. 10, Par. 5

⁵ Austria, Belgium, Denmark, Germany, Finland, Greece, Italy, Norway, Portugal, Sweden and the United Kingdom

⁶ Austrian Ministry for Transport, Innovation and Technology – Road Directorate: “High Level Expert Meeting on “Infrastructure Safety” – Infrastructure Safety in Europe – Evaluation of the results of the questionnaire”, Vienna (Austria), 2006

Road Safety Impact Assessment	AT	BE	CY	CZ	DE
	DK	EE	EL	ES	FI
	FR	HU	IE	IT	LT
	LU	LV	MT	NL	PL
	PT	SE	SI	SK	UK
Road Safety Audits	AT	BE	CY	CZ	DE
	DK	EE	EL	ES	FI
	FR	HU	IE	IT	LT
	LU	LV	MT	NL	PL
	PT	SE	SI	SK	UK
Network Safety + High-Risk Road Section Management	AT	BE	CY	CZ	DE
	DK	EE	EL	ES	FI
	FR	HU	IE	IT	LT
	LU	LV	MT	NL	PL
	PT	SE	SI	SK	UK
Road Safety Inspections	AT	BE	CY	CZ	DE
	DK	EE	EL	ES	FI
	FR	HU	IE	IT	LT
	LU	LV	MT	NL	PL
	PT	SE	SI	SK	UK

Diffusion of the proposed instruments in the EU Member States.
Codes of the Member States where the instruments are in use are bold and shaded.

In April and May 2006, the services of the European Commission launched a **public consultation** on their approach to road infrastructure safety management. 51 comments⁷ were received from all involved groups in society.

The main conclusions of the consultation can be summarised as follows:

- All comments agree on the definition of the problem and on the necessity of an action at European level, with differing degrees of intensity;
- The proposed measures and instruments are widely recognised as effective;
- A significant number of comments suggest to extend the provisions of the Directive also to roads not part of the trans-European road network;
- The Commission is expected to assist less experienced Member States in the implementation of the Directive, providing them with framework to develop methodology and know-how;
- The overwhelming majority of the comments welcome the approach envisaged by the Commission, to leave Member States free to adopt own legislation on a set of procedures;

On 22 May 2006, a **collective statement of support** of the initiative of the European Commission to propose this Directive has been co-signed and publicly released by nine European stakeholder organisations: FIA, ERF, ASECAP, ACEM, IRU, FEMA, EAPA, EUROBITUME and CORTE. These organisations, representing different categories of

⁷ Comments are published on the Commission Website: http://ec.europa.eu/transport/road/index_en.htm

involved parties, whose interests are often opposite and contradictory, unanimously welcome the initiative and call for the swift release of a Directive offering Member States a toolkit of safety management procedures.

In addition, the FIA, representing more than 100 million motorists worldwide and more than 40 million citizens in the European Union, called on the European Commission for “legislation to lead to a rapid improvement of road infrastructure”, stressing that “guidelines alone will not be enough to halve road deaths by 2010”⁸. This very clear statement from major road user organisations shows that there is growing impatience from the road user community at the lack of progress concerning safety of roads.

POLICY OPTIONS AND COMPARISON

Option 1: No policy change.

The advantage of maintaining the status quo would be that it does not involve any direct cost or effort for the management of infrastructure safety from the Community budget. On the other hand, experience has shown that exchange of best practices as a solution to improve road infrastructure safety is not, in itself, sufficient.

Option 2: To provide Member States with legislation requiring the adoption of guidelines on 4 infrastructure safety management procedures from them and leaving the details of their implementation to Member States.

Leaving Member States the freedom to adopt their own legislation on road safety assessment, audits, management and inspections would have several positive impacts:

- it would involve significantly less costs than the harmonisation option, since unsuitable and expensive solutions would be avoided by Member States;
- the knowledge of their already adopted approaches will enable Member States to adopt the appropriate guidelines to implement the requirements prescribed by the Directive;
- more effective infrastructure safety management instruments would be adopted in a shorter time and would immediately contribute to saving lives on the European roads;
- the comparison of the different approaches adopted by the Member States will allow the Commission to identify best practices and to possibly adopt further harmonised guidelines.

Option 3: To provide Member States with harmonised legislation aimed at introducing common infrastructure safety management procedures.

The harmonisation of Member States legislation on road safety assessment, audits, management and inspections would have some positive impacts:

- common instruments to strengthen safety to maximise the benefit to road users and the public at large would be provided;

⁸ EuroTest Press Release, 14 June 2006: «Vice President Barrot called to halve deaths on the road».

- the instruments would be coherent and homogeneous and would guarantee that common minimum safety requirements are reached on the Trans European Network roads.

However, obtaining an extended harmonisation would face the opposition of the Member States, as declared in several comments on the public consultation:

- most of the Member States would have to reorganise their road safety practices and legislation, even the already adopted and effective; this would involve huge investments;
- the large differences between the already effective road safety procedures in the Member States would make it difficult to choose which approach should be extended to all EU;
- harmonised guidelines would not take into account organisational differences between the Member States. As a consequence, their effectiveness could not be assured;
- the harmonisation process would require time to be finalised; the consequent number of lives saved would only be appreciated years later and would only partially justify the huge efforts and costs for Member States.

As a conclusion, Option 2 represents the best solution.

ANALYSIS OF IMPACT

Social impact

In 2003, the thematic network ROSEBUD⁹ undertook an impact analysis for the proposed package of procedures. It found it realistic to estimate the reduction potential for the implementation of the four procedures to the TEN roads to more than 600 fatalities and about 7000 injury accidents per year. This corresponds to 12%-16% of fatalities and 7%-12% of injury accidents.

ROSEBUD also estimated that 400 lives per year could be saved if the safety management was applied to motorways, and additional 900 lives could be saved every year if it was applied to the main road network, i.e. interurban roads or national roads (without motorways)¹⁰. As a result, the application of package of procedures to all motorways and main roads of the EU is estimated to reduce the number of fatalities by 1.300 every year, or 12 % of the fatalities occurring in this part of the network.

The Directive will pave the way for the explicit consideration of safety in road infrastructure projects, creating awareness for safety at all stages of decision-making. A similar approach has already been successfully carried out at European level in the field of environment. According to the Environmental Impact Assessment Directive¹¹, an Environmental Impact Assessment procedure ensures that environmental consequences of projects are identified and assessed before authorisation is given. The implementation of this Directive by the Member

⁹ ROSEBUD is the acronym for Road safety and Environmental Benefit-Cost and Cost-Effectiveness Analysis for Use in Decision-Making. Among the ROSEBUD partners are road research institutes from 11 different Member States or New Member States as well as from Israel and Norway
<http://partnet.vtt.fi/rosebud/>

¹⁰ Calculation for EU25 plus Bulgaria, Romania and Switzerland

¹¹ Council Directive 85/337/EEC of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment

States has significantly raised awareness of the environment in order to protect human health, diversity of species and to contribute to the quality of life.

Economic impact

As said above, the Directive is estimated to reduce the number of EU citizens dying on the TERN by more than 600 fatalities per year and the injury accidents by about 7000 per year. According to the monetary estimations of the White Paper, the welfare benefit of these reductions corresponds to more than 2,4 billions €per year. If the Directive will be applied on motorways and main roads, the reduction of fatalities is estimated around 1.300 every year; this corresponds to more than 5 billions €per year.

Administrative impact

The **road safety impact assessment** is produced in parallel with the approval procedure and the design process of the road. Therefore, no additional delays in the approval procedures can be expected. A rough estimation of the costs for the production of road safety impact assessments can be made considering the costs of the analogous environmental impact assessments (EIA). In general, EIA costs amount to less than 0,5% of the overall capital cost of a construction project. Costs in excess of 1% are the exception. For projects with capital costs in excess of 100 millions of € EIA costs may be as low as 0,2%.

Also **safety audits** are performed in parallel with the design and construction process of the road, and are therefore not expected to cause any delay. The thematic network RIPCORD-ISEREST¹² made a survey on audits costs estimations in the countries, where audits are already performed. The results of this study show that in the European countries audit costs range between 600 and 6.000 €per stage. In general, the estimations in the different countries indicate that audit costs are far less than 1% of the construction cost of the whole project.

Road safety inspection costs in the European countries were also surveyed by RIPCORD-ISEREST. Where inspections are carried out on a regular basis, costs range between 600 and 1.000 €per km of motorway. Considering the roads where the Directive will be mandatory (the EU25 TERN, having an overall length of approximately 85.000 km in 2005), one can estimate that the overall cost of the inspection of the whole network will range between 50 and 85 millions of € For a large sized country, having about 5.000 km of TERN on its territory, this means costs for inspections ranging between 3 and 5 millions of €

Network safety management is performed on the basis of accident records and inspections. Its organisational costs can be therefore assumed comparable to costs of routine road safety inspections.

Environmental and other impacts

Under the assumption that the reduction in accidents due to the implementation of the Directive is achieved via reduced congestion on European roads, it will also lead to a decrease

¹² RIPCORD-ISEREST is an acronym for Road Infrastructure Safety Protection – Core-Research and Development for Road Safety in Europe. Among the RIPCORD-ISEREST partners are road research institutes from 11 different Member States as well as from Norway, Switzerland and Turkey <http://www.ripcord-iserest.com/>

of the impacts of transport on environment. Emissions of air pollutants by vehicles stopped in the queue and the level of noise due to congestion will then be reduced. Fuels and energy consumption will then also be decreased thanks to a more efficient transport system.

It has not been possible to quantify to what extent these beneficial impacts on congestion and environmental impacts will be achieved as a result of the measures put forward in this proposal.

Furthermore, guidelines provided by Member States will mitigate the risk of judicial action undertaken by road users against road managers. In fact, the respect of the guidelines will represent the legal proof of their commitment to road safety management.

CONCLUSIONS

Today, in the European Union, road infrastructure and design are a contributing factor in one out of three fatal accidents. In order to increase safety of road infrastructures, the proposed Directive introduces a comprehensive system of road infrastructure safety management focussing on the following four procedures:

- (1) **Road safety impact assessments**
- (2) **Road safety audits**
- (3) **Network safety management**
- (4) **Safety inspections**

The present directive explicitly limits the requirements to a minimum set of elements necessary to achieve a safety effect and spread procedures that have shown to be effective.