

## European Commission

### Review of the Common Transport Policy

Task 1.5 Safety and Security - Final Report

**August 2009**

#### **Prepared for:**

European Commission  
Directorate-General Energy and Transport  
DM 28 - 0/110  
Avenue du Bourget, 1  
B-1049 Brussels (Evere)  
Belgium

#### **Prepared by:**

Steer Davies Gleave  
Via Ugo Bassi 7,  
40121 - Bologna  
Italy  
  
+39 051 6569381  
[www.steerdaviesgleave.com](http://www.steerdaviesgleave.com)

## Contents

<b>1</b>	<b>SAFETY AND SECURITY</b>	<b>1</b>
	Executive summary	1
	Introduction	1
	Summary of the policy	3
	Security	6
	Legislative framework	8
	Qualitative analysis	8
	Quantitative analysis	12
	Conclusions	20

## FIGURES

Figure 1.1	Proportion of drivers checked for alcohol (2001-2004)	14
Figure 1.2	Number of speed enforcement devices per 100,000 inhabitants 2004	15
Figure 1.3	Road fatalities in eu-15 and eu-12 (1990-2008)	16
Figure 1.4	Estimated trends in Road deaths in EU27	16
Figure 1.5	Percentage change in EU deaths between 2001 and 2007	17
Figure 1.6	Railway passenger fatalities in EU-15 between 1970 and 2005	18
Figure 1.7	Air fatalities: lives lost over EU27 territory	18
Figure 1.8	Air fatalities: lives lost by EU27 operators	19
Figure 1.9	Maritime accidents: oil spills at sea up to 700 tonnes	20
Figure 1.10	Maritime accidents: oil spills at sea of over 700 tonnes	20

## TABLES

Table 1.1	Assessment of measures for safety and security	8
Table 1.2	SWOT analysis – safety and security	11
Table 1.3	Legal BAC levels and their enforcement in some EU countries	13

# APPENDICES

LEGISLATIVE FRAMEWORK

LIST OF TSIS PREPARED BY THE EUROPEAN RAILWAY AGENCY

# 1 Safety and security

## Executive summary

- 1.1 The main problem related to safety identified in the 2001 White Paper was road safety, and reducing road fatalities was one of the key objectives of the White Paper. The accident rate in the rail transport sector was significantly lower than in the road sector, and therefore the objective here was to maintain or improve this, despite changes in the market. In the maritime and aviation sector, policy measures were mainly aimed at improving and harmonising the conditions for inspections and safety procedures.
- 1.2 Since 9/11, measures have also been taken to prevent criminal activities, particularly in air transport. There have also been proposals for other sectors, including maritime.
- 1.3 The analysis conducted for this study suggests that safety and security have been a priority. However, if the definition of 'safety' is uniform and the positive impacts of high safety and security levels are universally recognised, measures to obtain them are highly specific for each transport mode and Member State. The CTP sought to address this problem by adopting a twofold policy:
  - Set-up of specialised European bodies appointed to promote the harmonisation and, when feasible, the standardisation of technical standards and regulatory framework on safety rules;
  - Direct introduction of safety standards and procedures, usually through Directives.
- 1.4 Therefore, the full impact of safety measures introduced by the CTP can be fully appreciated only in countries and in transport modes in which the conjoint actions of European agencies and Member States managed to create a virtuous circle.
- 1.5 Although results to date are in some cases lower than expected, safety measures introduced are causing some reduction in the number of transport fatalities. As far as security is concerned, it is difficult to conclude whether the measures adopted by the CTP are appropriate compared to the current terrorist menace and criminal activities. There is an evident discrepancy between the rules in force in the aviation sector and other modes, particularly rail.

## Introduction

- 1.6 The Maastricht Treaty brought measures to improve transport safety into the EU Treaty and hence within the scope of the CTP. The rationale for the intervention of European institutions in transport safety and security is that achieving and maintaining satisfactory levels of safety and security on European transport network requires concerted actions by all EU Member States. Actions by individual Member States had proved to be insufficient.

- 1.7 Safety and security issues have a very wide impact on the functioning of the market, the competitiveness of operators, as well as on social legislation and technology. As a result, some measures related to safety were addressed within Task 1.1 (Market opening, regulation and enforcement), Task 1.6 (Social aspects) and Task 1.10 (Intelligent Transport Systems), and therefore this should be read in conjunction with these reports.

### Sources

- 1.8 Besides the 1992 and the 2001 White Papers, and the 2006 Mid-Term Review, a number of other sources have been consulted for this analysis. In the road transport sector:

- Regulation (EC) No 561/2006 of the European Parliament and of the Council of 15 March 2006 on the harmonisation of certain social legislation relating to road transport and amending Council Regulations (EEC) No 3821/85 and (EC) No 2135/98 and repealing Council Regulation (EEC) No 3820/85
- Scoreboard 2008: Road Safety (2008) Directorate-General Energy and Transport;
- Road Safety Action Programme (2003) Directorate-General Energy and Transport, [COM(2003)311];
- European Road Safety Action Programme: 2006 Mid-Term Review, [COM(2006)74];
- Communication from the Commission to the European Parliament and to the Council, A competitive automotive regulatory framework for the 21st century: Commission's position on the CARS 21 High Level Group Final Report, A contribution to the EU's Growth and Jobs Strategy, [COM(2007)22];
- Communication on an EU strategy to support Member States in reducing alcohol-related harm, [COM(2006)625].

- 1.9 In the rail transport sector:

- Rail Interoperability and Safety - Transposition of legislation and progress in the field (2007) - KEMA-RTC;
- Modern Rail, modern Europe (2007) - Directorate-General Energy and Transport;
- SAMNET and SAMRAIL (2004) Studies under the 5th Framework Research;
- Corridor studies lead by EC Coordinators;
- Railway Safety Performance in the EU - a biannual report from the European Railway Agency.

- 1.10 In maritime transport:

- Documents available on EMSA website;
- Maritime Transport Policy: increasing the competitiveness, safety and security of European shipping (2006), Directorate-General Energy and Transport;
- Communication from the Commission to the European Parliament, the Council, the European economic and Social Committee and the Committee of the

- 1.11 In air transport:
- Analysis of the European air transport market (2007) - DLR;
  - Annual Safety Report (2005-2006-2007) EASA;
  - Flying safely in Europe: EU aviation and security policy (2005) Directorate-General Energy and Transport;
  - Safety of third-country aircraft using Community airports (2008) Directorate-General Energy and Transport;
  - Facilitation of Aviation Security: Feasibility Study of “Registered Passenger”, Concept (2007);
- 1.12 In addition, the study takes into account the main legislative and regulatory measures issued showed in more detail in Appendix A.

***Structure for the remainder of the analysis***

- 1.13 The analysis of the specific policy area is structured according to the following:
- Summary of the policy;
  - Legislative framework;
  - Qualitative analysis;
  - Quantitative analysis;
  - Conclusions.

**Summary of the policy**

- 1.14 This section presents a brief overview of the safety and security measures adopted for each transport mode. In particular, given the role legislation has in improving safety and security, the following paragraphs discuss significant legislative provisions that have been introduced in these areas.

***Road***

- 1.15 The Commission has put significant effort in trying to increase the level of safety on European roads. In doing this, EU safety requirements were set in regard to:
- driver behaviour;
  - vehicle design; and
  - infrastructure.
- 1.16 The agreed method to enhance road safety is the principle of ‘shared responsibility’, which is at the core of the European Road Safety Charter<sup>1</sup>, where all

---

<sup>1</sup> See <http://www.erscharter.eu/>

members of society are invited to make their own measurable contribution to improving road safety.

- 1.17 The 2001 White Paper proposed that the European Union should set itself the target of halving the number of road deaths by 2010. All Member States faced similar road safety problems, such as excessive speed, drinking and driving, failure to wear a seat belt, insufficient protection provided by vehicles, existence of accident black spots, non-compliance with driving and rest times by commercial drivers and poor visibility. At that time, the forthcoming enlargement to include countries with a poor level of road safety was listed as an additional challenge.
- 1.18 The 3rd Road Safety Action Programme (2003-2010), which set the objective to halve the number of people killed on the roads by 2010 (with respect to 2000 levels) as ultimate goal, proposed a series of measures such as stepping up checks on road traffic, deploying new road safety technologies, improving road infrastructure and measures to improve users' behaviour, which are discussed in the qualitative analysis below.
- 1.19 Some measures taken to reduce the risks connected to the transport of dangerous goods (Council Directive 94/55/EC and Council Directive 95/50/EC) and maximum dimensions and weights (Council Directive 96/53/EC of 25 July 1996 as amended by Directive 2002/7/EC) can be included in this area of intervention.

### **Rail**

- 1.20 Whilst paving the way for the opening of rail market to competition, neither the 1992 White Paper nor the first railway Directives had sufficiently addressed the issue of rail safety. The 2001 White Paper stated that market opening and interoperability “must guarantee a level of safety at least equal to, if not higher than, that achieved today in the national context”. Key issues to address were:
- Modernisation and harmonisation of the safety regulatory structure and safety rules in the Member States and at European level;
  - Introduction of common safety requirements and elements for a safety management system;
  - Introduction of a transparent monitoring of railway safety in the Member States;
  - Enforcement of rules for accident and incident investigations.
- 1.21 These concerns were addressed within the Second Railway Package, and particularly by Directive 2004/49/EC and Regulation (EC) 881/2004, setting up the European Railway Agency (ERA).
- 1.22 National safety rules and technical standards were to be replaced by common standards, provided by Technical Specifications for Interoperability (TSIs) prepared by ERA and enforced by the Commission<sup>2</sup>. This was aimed at ensuring the improvement of safety levels in the new EU-wide rail market, and at the same time, setting transparent and non discriminatory rules. The second area above was mainly

---

<sup>2</sup> The most notable standard introduced is ERTMS (European Rail Traffic Management System). One component of the ERTMS, the European Train Control System (ETCS), enables trains to cross national borders and enhances safety. ERTMS is extensively dealt within Task 1.10 (Intelligent Transport Systems).

## Review of the Common Transport Policy

addressed through the harmonisation of safety certificates, which ensured that the rail operator had in place a reliable safety management system.

- 1.23 Directive 2004/49/EC also required each Member State to establish an independent rail safety authority. Finally, accident and incident investigations must be carried out by an autonomous body, independent from the various actors of the sector.
- 1.24 These provisions were included in the revised versions of the Interoperability Directives for high-speed and conventional rail system within the Community, recently merged in Directive 2008/57/EC, which also acknowledge the key role of the ERA.

### *Air*

- 1.25 The 1992 White Paper noted the high levels of safety of the air sector, but also the expected increase in traffic. The 2001 White Paper proposed the creation of a European Air Safety Agency (henceforth EASA), established with Regulation (EC) 1592/2002, recently repealed and replaced by Regulation (EC) 216/2008.
- 1.26 EASA was initially responsible for the harmonisation and enforcement of technical rules of civil aviation<sup>3</sup> and now also covers air operations, pilots' licences and, within the limits set by the Chicago Convention, the safety of third-country aircraft. It also includes standardisation inspections and safety oversight, with particular responsibility for ramp inspections.
- 1.27 The 2001 White Paper also noted that third-country aircraft had not always complied with international safety standards. Directive 2004/36/EC, now repealed and replaced by Regulation (EC) 215/2008, harmonised and enforced the procedures for ramp inspections of third-country aircraft landing at airports located in the Member States.
- 1.28 In its original version, the Directive granted the possibility of grounding aircraft failing to comply with safety standard. This provision was repealed by Regulation (EC) 2111/2005 and Commission Regulation (EC) 474/2006 which established a list of air carriers banned from operating flights within the Community.

### *Sea*

- 1.29 Transport by sea is a global business and maritime safety issues have worldwide implications. Nonetheless, as most of the goods transported to and from the Community are transported by sea, since the 1992 White Paper European measures have been taken to enhance the safety of sea transport. In particular, the following actions were taken forward:
- reinforcement of port State controls;
  - introduction and tightening up of safety standards;
  - creation of a European Maritime Safety Agency<sup>4</sup>.

---

<sup>3</sup> See for example Commission Regulation (EC) 1702/2003 and 2402/2003 on airworthiness and environmental certification of aircraft and related products, parts and appliances.

<sup>4</sup> Other actions, as the gradual phasing out of single-hull tankers, or the introduction of a compensation system for victims of marine pollution, though relating to maritime safety too, are dealt with within Task 1.8 (Environmental sustainability and transport-related energy issues).

## Review of the Common Transport Policy

- 1.30 The 2001 White Paper highlighted that the regulatory authority, the International Maritime Organisation (IMO), lacked effective powers of inspection and enforcement. In order to make the adoption of IMO standards more efficient, the Committee on Safe Seas (COSS) was set up with Regulation (EC) 2099/2002. It was involved in the implementation of a large number of safety standards set by IMO, such as for:
- implementation of the International Safety Management Code (Regulation 336/2006);
  - safe loading and unloading of bulk carriers (Directive 2001/96/EC);
  - marine equipment (Directive 96/98/EEC);
  - safety rules and standards for passenger ships (Council Directive 98/18/EC, as amended by Directive 2003/25/EC).
- 1.31 Finally, Regulation (EC) 1406/2002 established a European Maritime Safety Agency - EMSA, appointed to provide technical and scientific assistance to ensure the implementation and enforcement of Community legislation in the field of maritime safety, and evaluate its effectiveness.

### *Tunnels*

- 1.32 Many corridors on the Trans-European Road Network (TEN-T) include long tunnels, often built decades ago, which do not meet modern safety standards. The 2001 White Paper, produced shortly after the fires in Mont Blanc, Tauern and Gotthard road tunnels, proposed minimum safety requirements for tunnel exceeding 500 metres of length, whether in operation, under construction or at the design stage, and forming part of the TEN-T.
- 1.33 This proposal was enacted for road tunnels within Directive 2004/54/EC, which lays down a set of harmonised minimum safety standards dealing with the various organisational, structural, technical and operational aspects.
- 1.34 As far as rail tunnels are concerned, the Commission issued a TSI specifically dealing with safety issues in rail tunnels, applying to tunnels on the Trans-European Conventional and High-Speed network (Commission Decision 2008/163/EC).

## Security

### *Air*

- 1.35 Although the 2001 White Paper dealt with security of transport activities in the section related to the theme of managing the globalisation of transport and was drafted before the 9/11 terrorist attack<sup>5</sup>, this issue took on greater significance after this event.
- 1.36 In response, Regulation (EC) 2320/2002 made the security measures laid down by the European Civil Aviation Conference (ECAC) compulsory within the EU. The Regulation also requires Member States to adopt a national civil aviation security programme in order to ensure that common standards are applied, which relate to

---

<sup>5</sup> The 2001 White Paper was adopted on the 12<sup>th</sup> of September 2001.

airports, aircraft, passenger and cabin baggage, hold baggage and cargo. In 2008, Regulation (EC) 2320/2002 was repealed and replaced by Regulation (EC) 300/2008.

**Rail**

- 1.37 As for the road sector, some measures taken to reduce the risks connected to the transport of dangerous goods by rail (Directive 96/49/EC) can be included in this area of intervention. More recently, Regulation (EC) No 1371/2007 on rail passengers' right and obligations addressed the issue of security in railway stations and on trains and mandate railway companies to take adequate measures to limit risks.

**Sea**

- 1.38 The main legislative source dealing with security issues in the maritime sector, which complement each other with respect to regulation, monitoring and enforcement of security measures are:

- Regulation (EC) 725/2004, aimed at providing the basis for the interpretation, implementation and monitoring of the special measures adopted by IMO in 2002, amending the SOLAS Convention<sup>6</sup> and establishing the International Ship and Port Facility Security Code (ISPS Code).
- Directive 2005/65/EC, aimed at introducing a security system in port areas, based on the setting up of security authorities for each port. The authority takes the necessary measures in line with port security assessments and plans, which have to be updated on a regular basis.

**Supply chain**

- 1.39 The Commission launched a proposal [COM(2006) 79] aimed at improving protection against terrorist attacks within the inland freight transport sector without creating too stringent barriers on free trade and avoiding unnecessary administrative procedures. The proposal is based on:

- a mandatory system requiring Member States to create a security quality label ("secure operator") to be awarded to operators meeting European minimum security levels;
- a voluntary scheme under which operators in the supply chain increase their security performance in exchange for incentives;
- making operators in the supply chain responsible for their security performance;
- allowing "secure operators" to benefit from favourable security inspection conditions, giving them a commercial and competitive advantage;
- allowing regular updating and upgrading of security requirements, through the committee procedure, whereby the Commission is assisted by a committee formed of representatives from the Member States.

---

<sup>6</sup> International Convention for the Safety of Life at Sea.

- 1.40 Unfortunately, the process towards the adoption of the proposal has stalled. This is partly due to the fact that several stakeholders and operators claimed that it would put excessive costs on haulers and suggested other ways of dealing with this issue.

**Legislative framework**

- 1.41 Appendix A to this document sets out by transport mode the legislative interventions dealing with safety and security aspects by transport mode.

**Qualitative analysis**

- 1.42 This sets out a qualitative analysis of the actions taken by the EU with respect to transport safety and security.
- 1.43 Given the links safety and security have with most of the other policy areas - such as regulation and enforcement, environmental sustainability, social issue (just to quote some), some of the measures discussed in other reports have significant safety and security implications. In what follows an assessment of the measures that have not been addressed elsewhere in the study is provided, though other actions that have been discussed under different policy areas are also mentioned.

**TABLE 1.1 ASSESSMENT OF MEASURES FOR SAFETY AND SECURITY**

Measure	Introduction of legislation or other initiatives
Introduce European Road Safety Action Programme	<b>Done.</b> The 3rd European Road Safety Action Programme was adopted by the Commission in June 2003, and endorsed by the Transport Council on 5 June 2003, with the intent to provide an overall framework to achieve the objective of halving number of road accident victims in the European Union by 2010 (proposed in the 2001 White Paper). The Action Programme proposes an overall framework of actions to be undertaken at the Member State and regional level in the timeframe 2003-2010. It includes most of the measures described below. It was developed around three pillars: (i) encourage road users to improve their behaviour, in particular through better compliance with the existing legislation and pursuing efforts to combat dangerous practices; (ii) make vehicles safer, in particular through technical harmonisation and support for technical progress; (iii) improve road infrastructure, in particular by defining best practices and disseminating them at the local level.

Measure	Introduction of legislation or other initiatives
<p>Vehicle technical progress</p>	<p><b>Done.</b> The EU action has provided significant contribution to the progressive improvement of road vehicles safety standards, through several actions.</p> <p>Seat belts: since 9 May 2006, Directive 2003/20 requests everybody needs to fasten their seatbelts in vehicles where they are available.</p> <p>Speed limits deviced: Directive 2002/85/EC mandate the installation and use of speed-limitation devices for certain categories of motor vehicles in the Community (namely lighter commercial vehicles, like small buses, and good transport vehicles above 3.5 tonnes) which were excluded from this in previous legislation (applied only to heavy good vehicles over 12 tonnes and coaches over 10 tonnes).</p> <p>Blind spot mirrors for heavy goods vehicles: new heavy duty vehicles of more than 3.5 tons are equipped with blind spot mirrors as of January 2007 under Directive 2003/97/EC.</p> <p>Daytime Running Lights (DRL): following a wide public consultation, the Commission decided not to propose DRL on existing vehicles. As for new vehicles, however, Directive 2008/89/EC makes them mandatory (in the form of dedicated lights) as of 7 February 2011 for cars and light vans, as of 7 August 2012 for other vehicles.</p> <p>Roadworthiness: several measures have been taken to maintain a high degree of roadworthiness (e.g. Council Directive 96/96/EC, Directive 2000/30/EC).</p> <p>Protection of pedestrians: Regulation (EC) 78/2009 on the type approval of motor vehicles with regard to protection of pedestrians and other vulnerable road users introduced</p>
<p>Drawing-up of technical guidelines concerning infrastructure safety</p>	<p><b>Done.</b> A Directive on road infrastructure safety management (Directive 2008/96/EC) has been adopted which should make roads throughout Europe safer, by requesting infrastructure builders and managers to take road safety into account in all stages of road planning and operation on the trans-European network.</p>
<p>Harmonisation of road safety checks, penalties, driving restrictions and training</p>	<p><b>Done.</b> The EU has adopted various measures in the context of social harmonization and training, as discussed in Task 1.6, such as Regulation (EC) 561/2006).</p> <p>In addition, Commission Recommendation C(2000) 4397 of 17 January 2001 has been published on the maximum permitted blood alcohol content (BAC) for drivers of motorised vehicles.</p> <p>A proposal for Directive [COM(2008) 151 final] is currently under discussion to facilitate crossborder enforcement in the field of road safety.</p>
<p>Harmonisation of driving licences</p>	<p><b>Done.</b> Commission Directive 2006/126/EC on driving licenses seeks to harmonise driver licensing systems</p>
<p>Harmonisation of minimum safety standards in tunnels</p>	<p><b>Done.</b> More than 500 tunnels on the Trans-European Road Network, whether in operation, under construction or at the design stage, are affected by Directive 2004/54/EC, which was to be transposed into the national law of Member States by April 2006.</p>

## Review of the Common Transport Policy

Measure	Introduction of legislation or other initiatives
Developing accident data collection, analysis and dissemination	<b>Done.</b> The CARE database has been developed. The database is important to have a clear, simple and useful data collection to identify which project or which policy is going to have better results.
Creation of a common regulatory framework for railway safety	<b>Some progress.</b> Directive 2004/49/EC provides the general regulatory framework for railways safety, whilst the European Rail Agency is fully operational according to the mandates given to it by law (safety directive) and EC (contractual framework).  However, thanks to ERA itself, the regulatory framework concerning safety issues is still evolving, as new TSIs are issued replacing the old ones.
Creation of the European Aviation Safety Agency (EASA)	<b>Done.</b> EASA was set up in 2002.
Safety of third country aircraft	<b>Done.</b> Directive 2004/36/EC and, more recently, the issue of a list of carriers banned from EU skies have rendered air services in Europe safer and contribute to a better perception of air safety among European citizens.
European Maritime Safety Agency and safety rules for passenger ships	<b>Some progress.</b> The EMSA has been set up in 2002 and it is now fully operational. Regulation 1406/2002 on EMSA and Directive 98/18 on rules and standards for passenger ships have been amended on a regular basis to enlarge and update scope and measures. On 11 March 2009, the third maritime safety package has also been adopted by the European Parliament which will allow a more frequent and systematic inspection of vessels that pose a risk. It will also make it possible to definitively ban the worst of them from European ports.
Port state controls	<b>Some progress.</b> The legislation on port state controls, aimed at ensuring high levels of safety for ships operating in European ports, regardless of their flag has been implemented and it is regularly updated to improve its enforcement. A list of banned ships is now published regularly on the Internet.
Ship and port facility security	<b>Done.</b> The ISPS Code includes detailed requirements for governments and port authorities to improve security at port facilities.  In support, the Commission adopted a regulation on enhancing ship and port facility security which incorporates the ISPS Code into European law and extends its application to domestic operations with the EU.
Security rules at airports	<b>Done.</b> Regulation (EC) 2320/2002 and implementing Regulations have constituted until now a valid response to the threat of terrorist attacks in European airports and aircraft.
Enhancing supply chain security	<b>Not done.</b> The process towards the adoption of the proposal made by the Commission has stalled.

*SWOT analysis***TABLE 1.2 SWOT ANALYSIS – SAFETY AND SECURITY**

<b>Strengths</b>	<p>Additional costs for the introduction of road safety measures are generally lower than benefits, particularly when external costs are included</p> <p>The improvement of safety levels reduces social and private costs of transport activities (such as medical expenses, insurances payments, etc.)</p> <p>Enforcement of security regulations for air transport has helped prevent major terrorist incidents in the EU, and ensures passengers feel safe when travelling</p>
<b>Weaknesses</b>	<p>Some of the measures, such as those relating to improved infrastructure safety, might be costly and take a long time to materialise. In addition, while they will generate a positive external social effects (by reducing accidents and fatalities), their cost burden would be a private one in the first place, being paid by developers or managers of infrastructure (though they might recover it later thanks to traffic revenues or government grants)</p> <p>It is impractical to impose security measures on surface transport equivalent to those applied to air transport without severe and probably unacceptable costs and inconvenience to passengers.</p> <p>It is difficult to measure the success of security measures, as the main indicator of success is an absence of incidents</p> <p>Some safety measures have negative environmental impacts (for example, compulsory daytime running lights)</p> <p>Security rules on liquids in hand luggage inconvenience passengers and produce waste</p>
<b>Opportunities</b>	<p>Technological progress constantly generates new opportunities to improve safety levels</p> <p>Restrictive legislation induces industry to invest in new technology</p> <p>The indirect environmental effect of some safety measures is positive, as some measures, such as the introduction of limited speed zones, can induce a more regular speed of driving, leading to air and noise quality improvements</p>
<b>Threats</b>	<p>Some of the measures may be costly and their actual implementation may take long periods of time</p> <p>The harmonisation of safety legislation within EU Member States may not be uniform, determining undesired gaps in the safety levels achieved</p> <p>Frequent changes to safety and security requirements could make their implementation much more difficult, as suppliers and operators would not have sufficient time to adjust their products/services.</p>

**Results**

- 1.44 Many actions have been taken at EU level to achieve the objectives set by the CTP on safety and security. However, in the road sector, the extent to which EU actions can achieve the overall objective of halving road fatalities by 2010 depends on the efforts made by Member States to enforce legislation, and on trends in traffic volumes.

## Review of the Common Transport Policy

- 1.45 Accident figures, discussed below, show that in some countries, such as Luxembourg, France and Portugal, some positive results have been reached, thanks to the pro-active role of governments. On the other hand, in many new Member States (Romania, Slovenia, Lithuania, Slovakia and Poland) an increase in the number of fatalities between 2001 and 2007 has been registered, mainly due to an increase in traffic and insufficient infrastructure to cope with it.
- 1.46 In other transport modes, and particularly for rail sector, policies achieving and maintaining high safety levels are strongly correlated with the need to ensure:
- full interoperability of transport network and transport infrastructure;
  - the compatibility of pro-competitive policies with optimal safety levels.
- 1.47 Although the setup of European safety agencies (ESA, EMSA, EASA) brought the technical expertise needed to address safety issues, most policy measures require implementation in the national legislation of Member States. This could lead to delays in the opening of the transport market, as a result of the lack of interoperability or a clear regulatory framework or, in the worst case, the start up of liberalised services in the absence of a clear safety national legislation compliant with the European Directives. A report issued by KEMA-RTC on the implementation of the EU safety legislation in the rail sector reported that, in July 2007, Directive 2004/49/EC and 2004/50/EC had not been transposed yet by four and seven Member States respectively.

### Quantitative analysis

- 1.48 This section sets out a quantitative analysis of trends in safety and security.
- Road checks and penalties*
- 1.49 EU legislation does not lay down a common system of penalties for violations and the number of checks varies greatly between States.
- 1.50 Penalties are laid down by Member States and generally penalties are imposed directly by the enforcement authorities. The level and severity of fines and penalties differs but does not impact very much on the attitude to infringements. One of the main issues is the harmonisation of penalties and data on infringing firms and drivers also with regard to cross-border matters. An EC proposal is currently under discussion for a directive facilitating crossborder enforcement in the field of road safety.
- 1.51 Table 1.3 shows that there are significant differences in laws on drink driving between Member States. The Commission recommended that Member States should adopt a legal maximum blood alcohol content (BAC) limit of 0.5 mg/ml, or lower, for drivers and riders of all motorised vehicles, but in some States the limit is as high as 0.9 mg/ml. It is true that some research suggests that the actual value of the limit is less important than the extent to which these limits are applied, but findings are not clear in that respect, as pointed out in a recent report from the European Transport Safety Council (ETSC)<sup>7</sup>.

---

<sup>7</sup> Source: "Traffic Law Enforcement Across the EU: An Overview" [www.etsc.be](http://www.etsc.be)

1.52 Penalties also differ across the EU. In France the alcohol test is compulsory only in case of injured accidents; in Spain drunk-driving is punished by the arrest from 8 to 12 weeks and by license suspension. In Austria fines rise to €5,813, but if the drunk driver is a citizen of another country, then he will be banned from driving in Austria in the future.

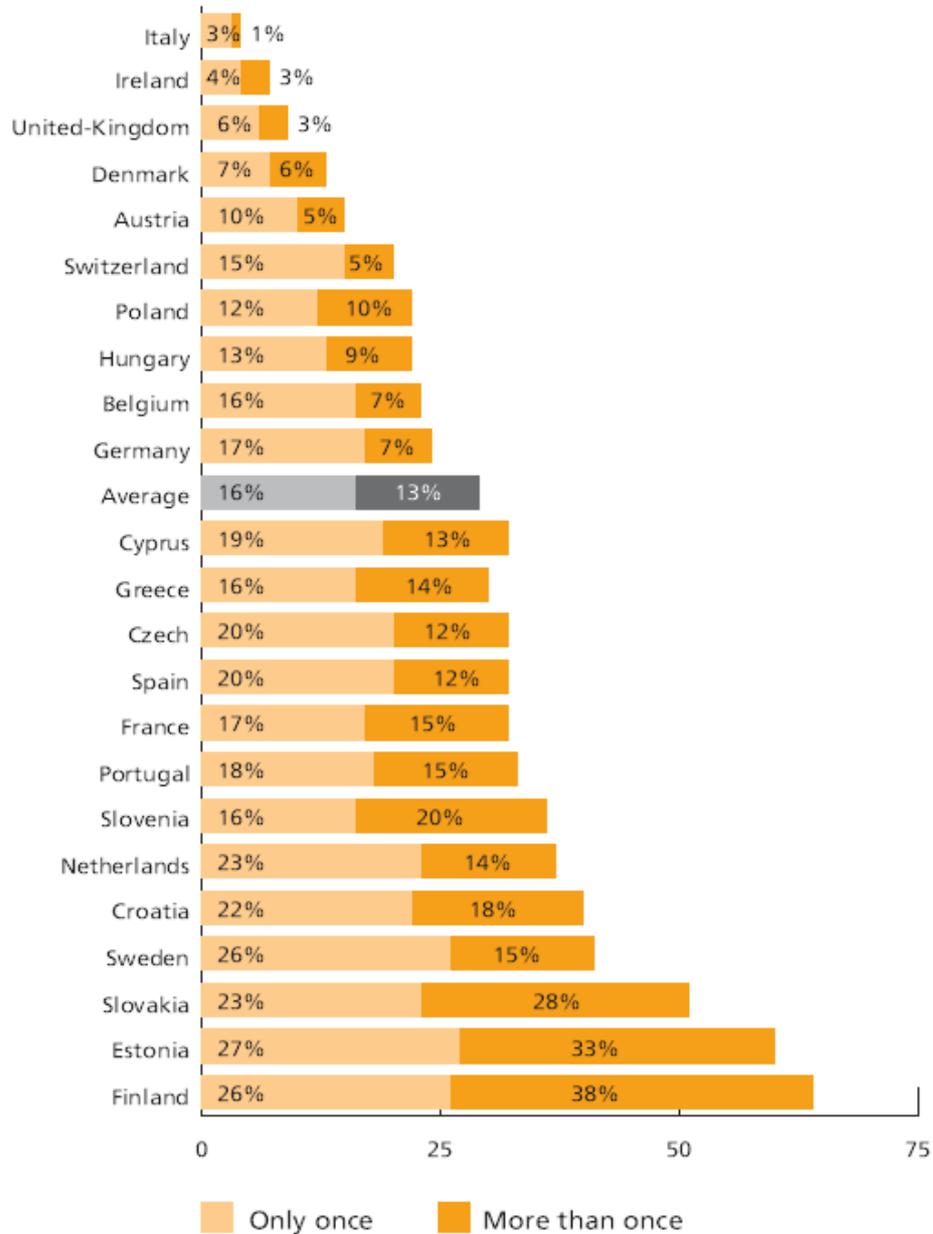
**TABLE 1.3 LEGAL BAC LEVELS AND THEIR ENFORCEMENT IN SOME EU COUNTRIES**

Country	Legal BAC limit	Enforcement intensity	Proportion of deaths from accidents caused by drivers over the legal limit <sup>5</sup>
Sweden	0.2 mg/ml	high (17% of inhabitants)	about 10% (SUNflower 2002)
Finland	0.5 mg/ml	high (34.5% of inhabitants)	16% (2003)
Netherlands	0.5 mg/ml	high (12.3% of inhabitants)	18% (2003)
Luxembourg	0.8 mg/ml	low (4.7% of inhabitants)	14% (2004)
UK	0.8 mg/ml	low (1% of inhabitants)	17.5% (2004)
Ireland	0.8 mg/ml	n/a	n/a
Cyprus	0.9 mg/ml	low (5.3% of inhabitants)	40% (2005)

Source: "Traffic Law Enforcement Across the EU: An Overview" [www.etsc.be](http://www.etsc.be)

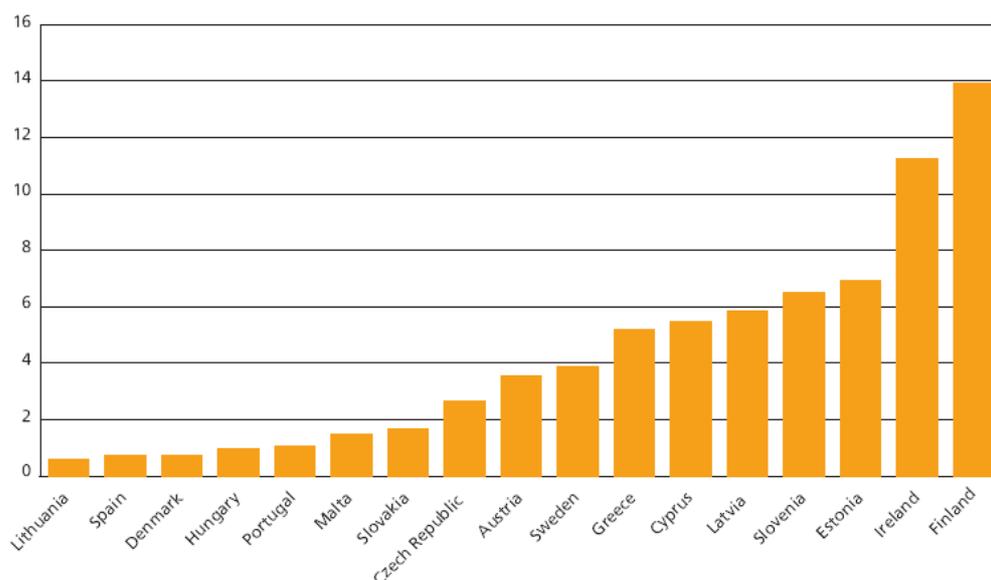
1.53 There are also significant differences in the rates of testing (Figure 1.1). In 2007, 8 million alcohol tests were carried out in France, 5 million in Germany, 4 million in Spain, 1 million in the UK and 800,000 in Italy.

FIGURE 1.1 PROPORTION OF DRIVERS CHECKED FOR ALCOHOL (2001-2004)



Source: "Traffic Law Enforcement Across the EU: An Overview" www.etsc.be

- 1.54 There are also significant differences in the enforcement of speed restrictions. Figures for the number of vehicles checked for speed are not available for most Member States, so the number of speed enforcement devices to indicate the level of enforcement has been studied (Figure 1.2). The data shown in the report from the European Traffic Safety Council quoted above, show that Finland, Ireland, Austria, Slovenia and Estonia check high numbers of vehicles. Most probably therefore, Austria has a higher level of checks, even though less equipment is used than in Finland and Ireland.

**FIGURE 1.2 NUMBER OF SPEED ENFORCEMENT DEVICES PER 100,000 INHABITANTS 2004**

Source: "Traffic Law Enforcement Across the EU: An Overview" [www.etsc.be](http://www.etsc.be)

- 1.55 Lithuania, Spain, Denmark, Portugal and Hungary at the bottom end of Figure 2 have little equipment at their disposal to enforce speed limits. Very little or no automated equipment is used. As a result, few offenders are caught in Lithuania and Portugal (no data were available for Hungary). In Lithuania, the level of speeding is high and speeding has been reported to be a major factor in nearly half of all fatal accidents. Lithuania belongs to the countries with the highest traffic death rates in Europe.

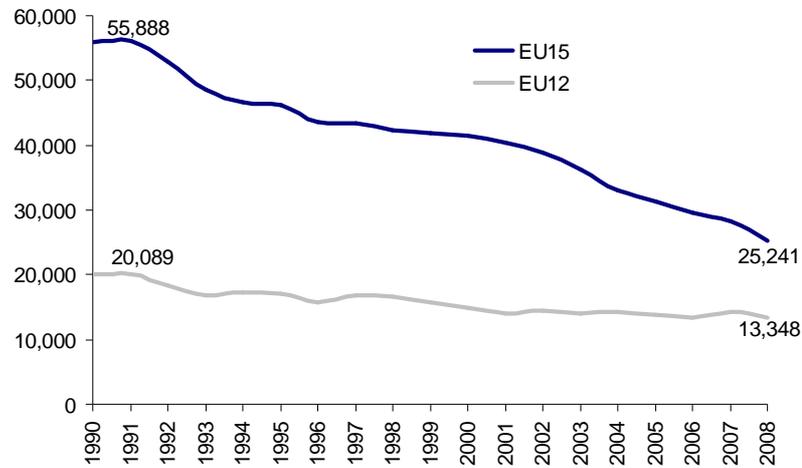
### ***Road fatalities***

- 1.56 Looking at the current available data on road fatalities, on current trends it appears unlikely that the objective of improving road safety, by halving deaths by 2010, as pointed out in the 2001 White Paper, will be achieved.
- 1.57 In 2008 about 38,500 people were killed in road traffic accidents in the EU, 15,700 less than in 2001, a 29% reduction<sup>8</sup>. However, the ETSC projects that if recent trends continue, the European Union will reach its target of a 50% reduction only in 2017, though differences exist among Member States. The EU15 is expected to reach the target in 2013 if it maintains progress so far, while slowest progress has been made in Central and Eastern European countries.
- 1.58 National figures show that France, Portugal and Luxembourg have progressed best over the past six years, reducing road deaths by 43%, 41% and 38% respectively. If these three countries persist with the efforts put so far, they will reach the target ahead of 2010. Belgium, Germany, the Netherlands and Spain have also reduced their road death toll considerably since 2001 and may halve the number of road deaths by 2015. For Germany this is in any case a good result given the fact that in 2000 it performed better than the EU average. Latvia is a remarkable exception among new Member States, with a reduction of 25% over 2001-2007.

<sup>8</sup> Source: CARE database (provisional statistics for 2008)  
[http://ec.europa.eu/transport/road\\_safety/observatory/statistics/care\\_en.htm](http://ec.europa.eu/transport/road_safety/observatory/statistics/care_en.htm)

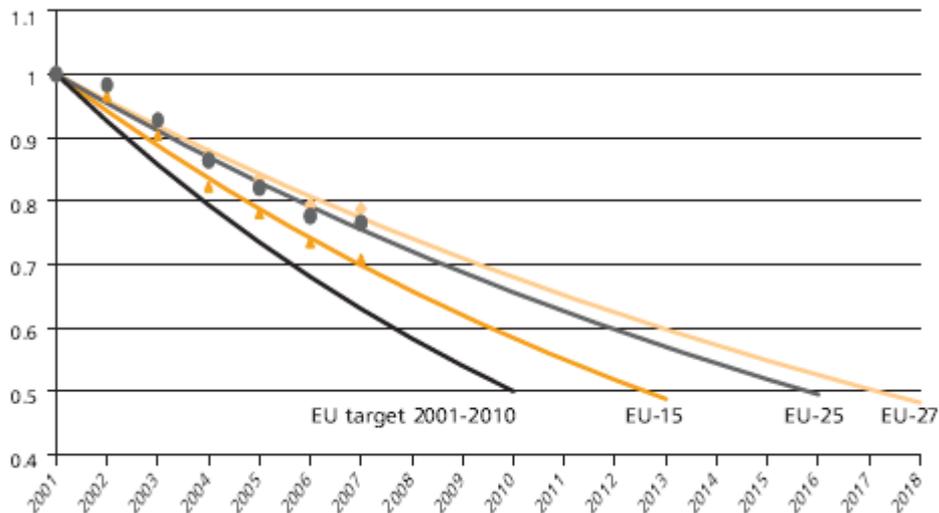
1.59 However, while Germany has been a road safety frontrunner in Europe for some time, France, Portugal and Luxemburg were in line with other Member States. This confirms that fast progress in road safety is possible for all countries, whatever their starting point.

**FIGURE 1.3 ROAD FATALITIES IN EU-15 AND EU-12 (1990-2008)**



Source: : Steer Davies Gleave elaboration on Energy and Transport Statistical Pocketbook 2009, DG TREN and CARE report March 2009

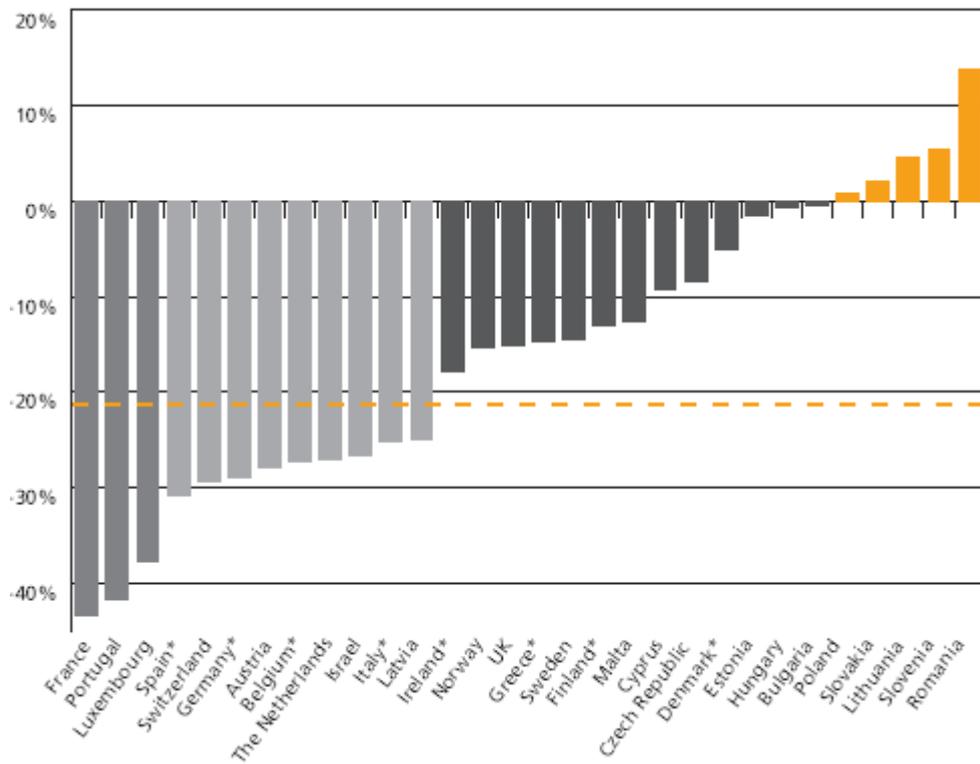
**FIGURE 1.4 ESTIMATED TRENDS IN ROAD DEATHS IN EU27**



Source: ETSC 2008, A blueprint for the EU's 4<sup>th</sup> Road Safety Action Programme 2010-2020 Note: 1995 values = 100.

1.60 Several central European States (including Romania, Slovenia, Lithuania, Slovakia and Poland) have experienced an increase in road fatalities also because of the increase in traffic volumes.

FIGURE 1.5 PERCENTAGE CHANGE IN EU DEATHS BETWEEN 2001 AND 2007



Source: ETSC 2008, A blueprint for the EU's 4<sup>th</sup> Road Safety Action Programme 2010-2020

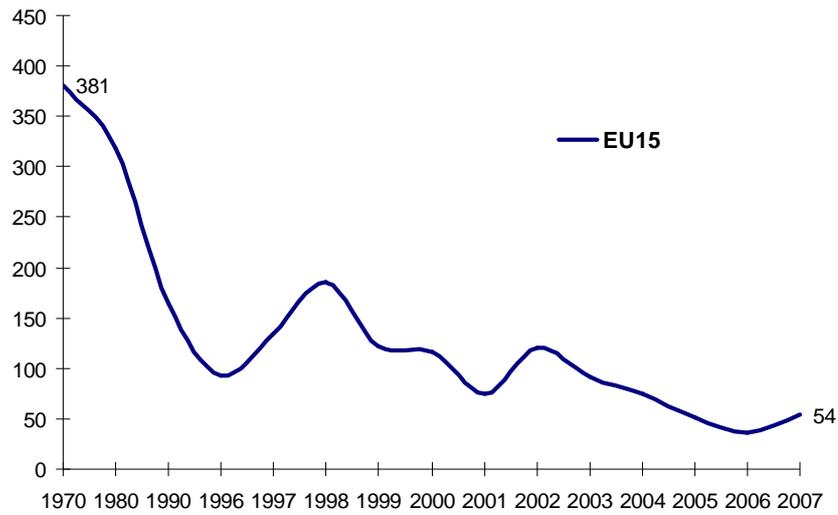
- 1.61 An increasing numbers of motorcyclists are killed or injured on the roads: a 13% increase of this type of victims has been registered in a selection of European countries between 1997 and 2006<sup>9</sup>.

**Rail accidents**

- 1.62 The number of fatalities in rail accidents has also continued to decline (Figure 1.6 below).

<sup>9</sup> SafetyNet, Building the European Road Safety Observatory, Annual Statistical Report 2008

**FIGURE 1.6 RAILWAY PASSENGER FATALITIES IN EU-15 BETWEEN 1970 AND 2005**

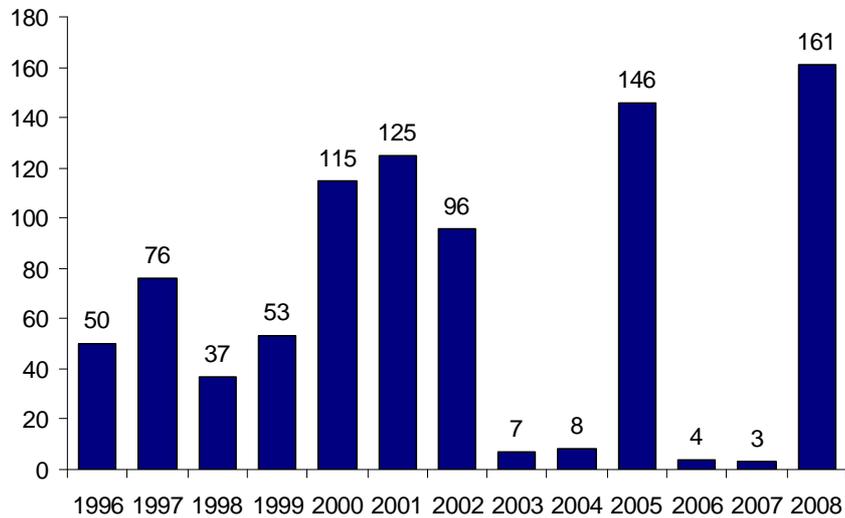


Source: Steer Davies Gleave elaboration on Energy and Transport 2009 Statistical Pocketbook. Note: data are provided by the International Union of Railways (UIC) and do not include railway employees or non-users

**Air accidents**

1.63 Figure 1.7 below shows the trend in the number of fatalities in air accidents over EU territory. Figure 1.8 shows the trend in the number of lives lost on flights operated by EU carriers.

**FIGURE 1.7 AIR FATALITIES: LIVES LOST OVER EU27 TERRITORY**



Source: Steer Davies Gleave elaboration on Energy and Transport 2009 Statistical Pocketbook

FIGURE 1.8 AIR FATALITIES: LIVES LOST BY EU27 OPERATORS



Source: Steer Davies Gleave elaboration on Energy and Transport 2009 Statistical Pocketbook

- 1.64 The graphs do not show any consistent trend. This is as a result of the low number of accidents each year, and the large number of lives that can be lost in an individual accident. For example the loss of the Helios Air 737 in 2005 accounted for all but 6 of the fatalities of EU carriers in 2005.
- 1.65 Ideally, statistics would be available for safety lapses which do not lead to accidents. This would give a more reliable picture of the trend in aviation safety. However, there are no consistent statistics available. A key issue is that variations in the number of incidents reported to the aviation authorities by air carriers and air traffic control can reflect variations in reporting as well as variations in the number of incidents which actually occur. For both legal and cultural reasons, reporting of incidents which do not result in accidents is not always complete.
- 1.66 Limited analysis available for the air traffic management sector indicates that, in those Member States for which data is available, the number of incidents is remaining approximately unchanged despite increasing traffic levels; however it should be emphasised that this only covers safety issues caused by air traffic control.<sup>10</sup>

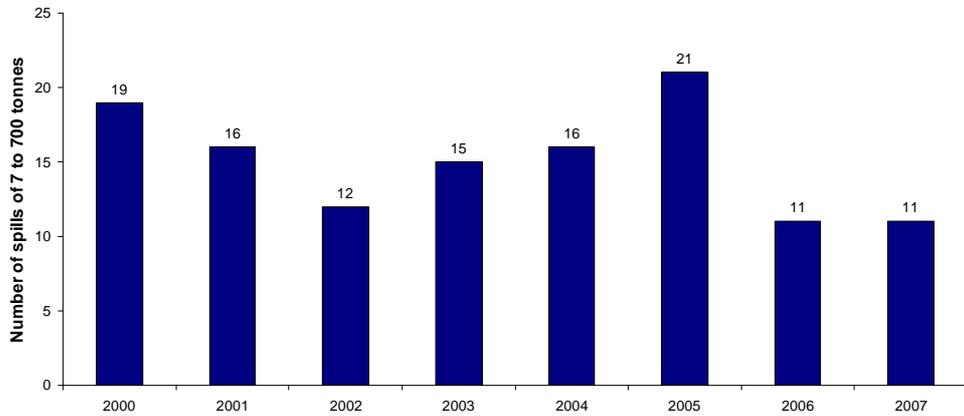
#### ***Maritime accidents***

- 1.67 The figures below show reported oil spills from tankers, combined carriers and barges in the north-east Atlantic Ocean, Baltic Sea and Mediterranean Sea up to 700 tonnes per spill and over 700 tonnes.

<sup>10</sup> Eurocontrol Performance Review Commission, Performance Review 2006

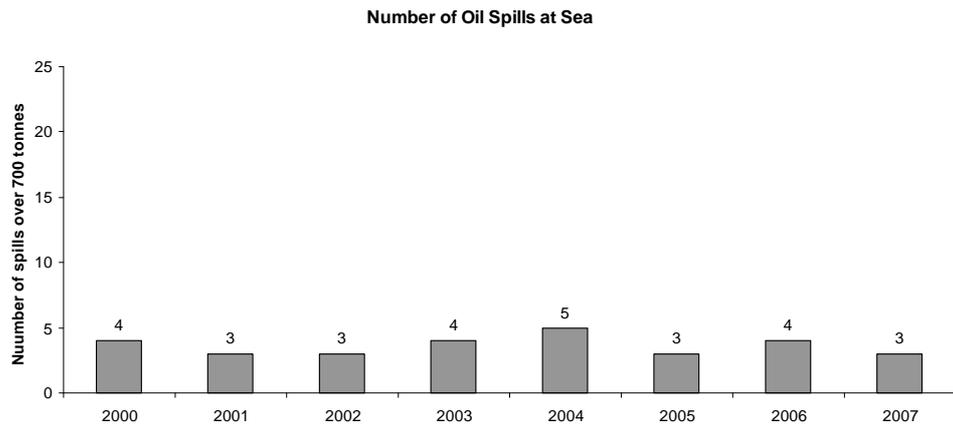
1.68 It provides a partial indication of the total amount of oil released to the marine environment from the transport of oil. Oil spills and discharges below 7 tonnes from tankers and other shipping, and spills that are not reported or detected have not been included due to poor data availability and reliability. However, such accidents are regarded to have a relatively small contribution to the overall quantity of oil spilled into the marine environment.

**FIGURE 1.9 MARITIME ACCIDENTS: OIL SPILLS AT SEA UP TO 700 TONNES**



Source: Steer Davies Gleave elaboration on Energy and Transport 2009 Statistical Pocketbook

**FIGURE 1.10 MARITIME ACCIDENTS: OIL SPILLS AT SEA OF OVER 700 TONNES**



Source: Steer Davies Gleave elaboration on Energy and Transport 2009 Statistical Pocketbook

## Conclusions

### *The overall impact of the policy*

1.69 The current data on road fatalities indicates that the objective of reducing road deaths by 50% by 2010, as defined in the 2001 White Paper, is unlikely to be achieved; nonetheless, there has been significant progress. According to provisional CARE statistics, in 2008 about 38,500 people were killed in road traffic accidents in the EU, 15,700 less than in 2001, a 29% reduction, although different patterns were registered in different Member States. In part, this reflects differences in policies and practices between Member States, that are still responsible for most elements of road transport policy. For example, there are significant differences in the enforcement of laws on drink driving and speed restrictions.

## Review of the Common Transport Policy

- 1.70 As far as the rail sector is concerned, the statistics show a long term downward trend for the EU15 countries. This can be attributed to a lot of factors, among which the special attention received by both European institutions and Member States in view of the coming opening of the market, the increasing role of the European Rail Agency and the gradual introduction of innovations which enhanced rail safety levels (for example changes to vehicle design).
- 1.71 In the aviation sector, the long term trend in the number of accidents and lives lost is downwards, but there is no clear trend, partly because the number of major fatal accidents is now so low. Analysis of a trend in aviation safety would require reliable data to be available safety-related incidents which do not actually result in accidents (for example “near misses”), but this data is not available.
- 1.72 In the maritime sector, figures on oil spills and ships lost do not show a clear trend. However, improvements in maritime safety remain a key challenge in order to protect the maritime environment.
- 1.73 As far as security is concerned, it is very difficult to measure whether the CTP measures relating to transport security have been successful in achieving the objective of maintaining a secure transport system, as the main indicator of success is the absence of incidents, and this reflects a number of wider factors. Although there have been no major attacks on the European air transport sector since 2001, there have been a number of attacks on local transport (principally, in Madrid on 11 March 2004 and in London on 7 July 2005), and national security services have disrupted several attempted attacks on the air and rail transport. However, it is clear that there is some discrepancy between the measures undertaken in different transport sectors: it is not possible to protect Europe’s railways and metro systems to the same degree as its air transport system without imposing significant and probably unacceptable costs and inconvenience on passengers.

### *Contemporary developments*

- 1.74 The EU is taking several actions to address safety and security issues. In particular, many measures are aimed at increasing the scope of activity of European safety agencies and in facilitating the adoption of common safety standards and procedures across all transport modes.
- 1.75 In the road sector, the following proposals are under discussion:
- Proposal for a regulation of the European Parliament and of the Council concerning type-approval requirements for the general safety of motor vehicles, COM (2008) 316
  - Proposal for a Directive of the European Parliament and of the Council facilitating cross-border enforcement in the field of road safety, COM (2008) 151
  - Proposal for a Directive of the European Parliament and of the Council on road infrastructure safety management, COM (2006) 569, discussed in the qualitative section
- 1.76 In the aviation sector:
- As part of the Single European Sky II (SES II) Package the European Commission proposes to amend the EASA Regulation (216/2008/EC) to extend EASA’s competences on aerodromes, air traffic management and air navigation services.

1.77 Rail:

- Directive 2008/110/EC amending Directive 2004/49/EC was approved in December 2008 aiming at improving the cross-acceptance of railway vehicles in the EU through a more systematic application of the principle of mutual recognition to national authorisation procedures and harmonisation of certain provisions. This is expected to increase the competitiveness of railways in Europe.
- Works done by the Social Dialogue Committee on examining expressions and words used in safety critical situations and the messages exchanged between agents. The purpose is to define by end of 2009 a “unique operational rail language”.

*Lessons learnt*

- 1.78 The number of lives lost in road accidents continues to be very high, and also varies significantly between Member States. This reflects differences in culture, legislation and enforcement activity.
- 1.79 The experience of the best performing nations suggests that the key to their success has been their commitment to tackle major road offences (drink driving, speeding and non-use of seat belts) and their investments in infrastructure improvements. For instance, the legal BAC (blood alcohol content) was lowered and the severity of sanctions increased in Luxembourg. The deployment of automatic speed control cameras played a major role in reducing speed-related accidents in France. Apart from stricter law enforcement, Portugal has also stepped up investments in infrastructure, transferring high speed traffic from rural roads to newly built motorways.
- 1.80 Therefore, the EU should put more effort in ensuring that Member States adopt the right strategies (which might differ from country to country) and commit themselves in implementing them. The 4<sup>th</sup> Road Safety Programme 2010-2020 is also a good opportunity for the EU guide Member States in this respect. Appropriately, the ETSC points out that actions aimed at tackling speeding, drink driving and lack of seat belt and child safety restraint use as well as improvement in infrastructure design and vehicles should be on the top of the 4<sup>th</sup> Road Safety Programme agenda<sup>11</sup>.
- 1.81 In addition, the new Road Safety Programme should also pay attention to tackle new emerging trends, such as the increasing numbers of motorcyclists among those killed or injured on the roads. The protection of weaker road users, such as children and young people, elders, pedestrians and cyclists, should also deserve further attention.
- 1.82 Then, the existing differences between Member States should be taken into account in setting new targets for road deaths. Although the Union should commit itself to reach a target for road deaths reduction in the next decade (whose value will need to be identified learning from past experience and future projections of road demand), it is clear that those Member States that to date register the worst performance in the EU, will need to provide the highest contribution toward the achievement on any target set at the EU level.

---

<sup>11</sup> See: ETSC 2008, A blueprint for the EU’s 4<sup>th</sup> Road Safety Action Programme 2010-2020

## Review of the Common Transport Policy

- 1.83 In future the EU should also consider the opportunity to introduce a target also for non-fatal injuries, which are of increasing importance in terms of both societal and economic costs. However, to date the definition of such a target at the EU level seems to be limited by the availability of data, as there are still differences between Member States' definitions of slight and serious injuries and reporting procedures. Thus, the EU should first encourage Member States to adopt a common definition of slight and serious injuries to foster comparability in official police-reported road accident statistics.
- 1.84 Limitations on data availability are present also in other sectors, where it hinders the possibility to draw firm conclusions. In particular, it is hard to determine whether air transport has become significantly safer, because the number of accidents is already so low (although it is clear that it is not increasing significantly despite the increase in traffic).

APPENDIX  
A  
LEGISLATIVE FRAMEWORK

## A1. LEGISLATIVE FRAMEWORK

The list below includes the most relevant legislative texts analysed for this task, for each transport mode.

### *Road transport*

- Council Directive 92/6/EEC of 10 February 1992 on the installation and use of speed limitation devices for certain categories of motor vehicles in the Community;
- A group of legislative document on roadworthiness testing;
- A group of legislative document on vehicle safety standards and vehicle usage;
- Commission Recommendation of 17 January 2001 on the maximum permitted blood alcohol content (BAC) for drivers of motorised vehicles [C(2000) 4397];
- Council Resolution 2004/C 97/01 of 27 November 2003 on combating the impact of psychoactive substances use on road accidents;
- A group of legislative document on driving licences and drivers' training;
- Commission Recommendation 2004/345/EC of 6 April 2004 on enforcement in the field of road safety.

### *Rail*

- Directive 2001/14/EC on the allocation of railway infrastructure capacity and the levying of charges for the use of railway infrastructure and safety certification;
- Directive 2004/49/EC on the Community's railways and amending Council Directive 95/18/EC on the licensing of railway undertakings and Directive 2001/14/EC on the allocation of railway infrastructure capacity and the levying of charges for the use of railway infrastructure and safety certification (Railway Safety Directive);
- Regulation (EC) No 881/2004 establishing a European Railway Agency;
- Directive 2008/57/EC on the interoperability of the rail system within the Community;
- Directive 2008/110/EC amending Directive 2004/49/EC on safety on the Community's railways;
- Technical Specifications for Interoperability - TSIs for High-Speed and Conventional Rail, listed on Appendix B.

### *Aviation*

- Council Directive 94/56/EC of 21 November 1994 establishing the fundamental principles governing the investigation of civil aviation accidents and incidents;
- Regulation EC/1592/2002 of the European Parliament and of the Council of 15 July 2002 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency;

## Review of the Common Transport Policy

- Commission Regulation EC/1702/2003 of 24 September 2003 laying down implementing rules for the airworthiness and environmental certification of aircraft and related products, parts and appliances, as well as for the certification of design and production organisations;
- Commission Regulation EC/2042/2003 of 20 November 2003 on the continuing airworthiness of aircraft and aeronautical products, parts and appliances, and on the approval of organisations and personnel involved in these tasks;
- Directive 2004/36/EC of the Parliament and of the Council of 21 April 2004 on the safety of third-country aircraft using Community airports;
- Regulation EC/2111/2005 of the European Parliament and of the Council of 14 December 2005 on the establishment of a Community list of air carriers subject to an operating ban within the Community and on informing air transport passengers of the identity of the operating air carrier, and repealing Article 9 of Directive 2004/36/EC;
- Commission Regulation (EC) No 474/2006 of 22 March 2006 establishing the Community list of air carriers which are subject to an operating ban within the Community referred to in Chapter II of Regulation (EC) No 2111/2005 of the European Parliament and of the Council;
- Regulation (EC) No 216/2008 of the European parliament and of the council of 20 February 2008 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, and repealing Council Directive 91/670/EEC, Regulation (EC) No 1592/2002 and Directive 2004/36/EC;

### *Maritime*

- Council Directive 94/57/EC of 21 November 1994 on common rules and standards for ship inspection and survey organisations and relevant activities of maritime administrations;
- Council Directive 95/21/EC of 19 June 1995 concerning the enforcement, in respect of shipping using Community ports and sailing in the waters under the jurisdiction of the Member States, of international standards for ship safety, pollution prevention and shipboard living and working conditions (port State control);
- Council Directive 96/98/EC of 20 December 1996 on marine equipment;
- Council Directive 98/18/EC of 17 March 1998 on safety rules and standards for passenger ships;
- Council Directive 1999/35/EEC of 29 April 1999 on a system of mandatory surveys for the safe operation of regular ro-ro ferry and high-speed passenger craft services;
- Directive 2001/96/EC of the European Parliament and of the Council of 4 December 2001 establishing harmonised requirements and procedures for the safe loading and unloading of bulk carriers;

## Review of the Common Transport Policy

- Directive 2002/59/EC of the European Parliament and of the Council of 27 June 2002 establishing a Community vessel traffic monitoring and information system and repealing Council Directive 93/75/EEC;
- Regulation (EC) No 417/2002 of the European Parliament and of the Council of 18 February 2002 on the accelerated phasing-in of double hull or equivalent design requirements for single hull oil tankers and repealing Council Regulation (EC) No 2978/94;
- Regulation (EC) No 1406/2002 of the European Parliament and of the Council of 27 June 2002 establishing a European Maritime Safety Agency;
- Regulation (EC) 2099/2002 establishing a Committee on Safe Seas and the Prevention of Pollution from Ships (COSS) and amending the Regulations on maritime safety and the prevention of pollution from ships
- Directive 2003/24/EC of the European Parliament and of the Council of 14 April 2003 amending Council Directive 98/18/EC on safety rules and standards for passenger ships.
- Directive 2003/25/EC of the European Parliament and of the Council of 14 April 2003 on specific stability requirements for ro-ro passenger ships;
- Commission Regulation (EC) No 2244/2003 of 18 December 2003 laying down detailed provisions regarding satellite-based Vessel Monitoring Systems;
- Regulation (EC) No 336/2006 of the European Parliament and of the Council of 15 February 2006 on the implementation of the International Safety Management Code within the Community and repealing Council Regulation (EC) No 3051/95 (Text with EEA relevance);

### *Tunnels*

- Directive 2001/54/EC on road tunnels
- Commission Decision (2008/163/EC) concerning the technical specification of interoperability relating to 'safety in railway tunnels' in the trans-European conventional and high-speed rail system.

### *Security*

- Regulation (EC) No 2320/2002 of the European Parliament and of the Council of 16 December 2002 establishing common rules in the field of civil aviation security;
- Council Directive 96/49/EC of 23 July 1996 on the approximation of the laws of the Member States with regard to the transport of dangerous goods by rail;
- Regulation (EC) No 1371/2007 of the European Parliament and of the Council of 23 October 2007 on rail passengers' rights and obligations;
- Directive 2005/65/EC of the European Parliament and of the Council of 25 October 2005 on enhancing port security (text with EEA relevance);
- EU Regulation 725/2004 on enhancing ship and port facility security;

## Review of the Common Transport Policy

- Commission proposal [COM (2006) 79 / SEC (2006) 251] on enhancing supply chain security.

APPENDIX

B

LIST OF TSIS PREPARED BY THE EUROPEAN RAILWAY AGENCY

**B1. LIST OF TSIS PREPARED BY THE EUROPEAN RAILWAY AGENCY**

**B1.1 HS TSIs adopted by Commission Decisions**

- Commission 2002/730/EC concerning the technical specification for interoperability relating to the maintenance subsystem of the trans-European high-speed rail system referred to in Article 6(1) of Directive 96/48/EC;
- Commission 2002/732/EC concerning the technical specification for interoperability relating to the infrastructure subsystem of the trans-European high-speed rail system referred to in Article 6(1) of Council Directive 96/48/EC;
- Commission 2002/733/EC concerning the technical specification for interoperability relating to the energy subsystem of the trans-European high-speed rail system referred to in Article 6(1) of Directive 96/48/EC;
- Commission 2002/734/EC concerning the technical specification for interoperability relating to the operation subsystem of the trans-European high-speed rail system referred to in Article 6(1) of Council Directive 96/48/EC;
- Commission 2002/735/EC concerning the technical specification for interoperability relating to the rolling stock subsystem of the trans-European high-speed rail system referred to in Article 6(1) of Directive 96/48/EC;
- Commission 2006/860/EC concerning a technical specification for interoperability relating to the control-command and signalling subsystem of the trans-European high speed rail system and modifying Annex A to Decision 2006/679/EC concerning the technical specification for interoperability relating to the control-command and signalling subsystem of the trans-European conventional rail system;
- Commission 2008/386/EC modifying Annex A to Decision 2006/679/EC concerning the technical specification for interoperability relating to the control-command and signalling subsystem of the trans-European conventional rail system and Annex A to Decision 2006/860/EC concerning the technical specification for interoperability relating to the control-command and signalling subsystem of the trans-European high-speed rail system.

**B1.2 Revised HS TSIs adopted by Commission Decisions**

- Commission 2008/217/EC concerning a technical specification for interoperability relating to the 'infrastructure' sub-system of the trans-European high-speed rail system;
- Commission 2008/231/EC concerning the technical specification of interoperability relating to the operation subsystem of the trans-European high-speed rail system adopted referred to in Article 6(1) of Council Directive 96/48/EC and repealing Commission Decision 2002/734/EC of 30 May 2002;
- Commission 2008/232/EC concerning a technical specification for interoperability relating to the 'rolling stock' sub-system of the trans-European high-speed rail system;
- Commission 2008/284/EC concerning a technical specification for interoperability relating to the 'energy' sub-system of the trans-European high-speed rail system.

### B1.3 CR TSIs adopted by Commission Decisions/Commission Regulations

- Commission Regulation 62/2006/EC concerning the technical specification for interoperability relating to the telematic applications for freight subsystem of the trans-European conventional rail system;
- Commission Decision 2006/66/EC concerning the technical specification for interoperability relating to the subsystem 'rolling stock – noise' of the trans-European conventional rail system;
- Commission Decision 2006/679/EC concerning the technical specification for interoperability relating to the control-command and signalling subsystem of the trans-European conventional rail system;
- Commission Decision 2006/860/EC concerning a technical specification for interoperability relating to the control-command and signalling subsystem of the trans-European high speed rail system and modifying Annex A to Decision 2006/679/EC concerning the technical specification for interoperability relating to the control-command and signalling subsystem of the trans-European conventional rail system;
- Commission Decision 2008/386/EC modifying Annex A to Decision 2006/679/EC concerning the technical specification for interoperability relating to the control-command and signalling subsystem of the trans-European conventional rail system and Annex A to Decision 2006/860/EC concerning the technical specification for interoperability relating to the control-command and signalling subsystem of the trans-European high-speed rail system;
- Commission Decision 2006/861/EC concerning the technical specification of interoperability relating to the subsystem rolling stock – freight wagons of the trans-European conventional rail system;
- Commission Decision 2006/920/EC concerning the technical specification of interoperability relating to the subsystem Traffic Operation and Management of the trans-European conventional rail system.

### B1.4 Transversal (applicable to both HS and CR) TSIs adopted by Commission Decision

- Commission Decision 2008/163/EC concerning the technical specification of interoperability relating to 'safety in railway tunnels' in the trans-European conventional and high-speed rail system;
- Commission Decision 2008/164/EC concerning the technical specification of interoperability relating to 'persons with reduced mobility' in the trans-European conventional and high-speed rail system.