



Interim evaluation of the Policy orientations on road safety 2011-2020

Written by European Commission, DG MOVE, Unit C4: Road safety
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**Interim evaluation of the
Policy orientations on road safety 2011-2020**

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Interim evaluation of the Policy orientations on road safety 2011-2020

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1. EXECUTIVE SUMMARY

This report presents the outcomes of the interim evaluation of the *Policy orientations on road safety 2011-2020*. The evaluation takes stock of EU road safety actions completed between 2011 and March 2015 within this policy framework. It assesses the progress made towards the target of reducing the number of road fatalities by 50% until 2020.

The evaluation is based on data from the EU road accidents database CARE, on a technical study by a road safety expert, on information from external stakeholders and on findings from a wide literature review. It presents indications of the level of EU relevance, effectiveness, efficiency, coherence and added value in the road safety area.

The number of road fatalities in the EU is decreasing. Safety is improving especially for the young people and for motorised road users. This evaluation study shows that EU actions very likely have contributed to this reduction.

The strategic road safety target remains relevant and challenging. However, in order to reach the fatality target by 2020, a higher annual decrease rate is needed from this point onwards. This means that additional effort on EU and national level need to be considered. Actions by Member States are more likely to have quick enough effect to impact on the road safety performance before 2020. EU actions within the framework have to be continued, not least to prepare the ground for road safety progress in the longer term.

Nevertheless, the fatality target only covers part of the road safety problem. The strategic target and the actions under the Policy orientations are not seen to sufficiently tackle the large number of serious road traffic injuries. Monitoring of injury reduction at EU level is weak. The number of serious injuries is not decreasing as rapidly as the road deaths and for every person killed on the roads another 8-9 people are reported to have sustained serious injury.

It is concluded that the road safety policy framework is in essence still relevant and complete. It addresses all major road user groups and current main problems. In the time ahead, there needs to be a continued focus both on motorised road users (the majority of the road fatalities) and on the vulnerable road users (for which fatality rates have decreased less than average).

The evaluation concludes that the EU road safety work is generally on the right track. Continued efforts are needed to reach the strategic target. Several actions under the Policy orientations remain to be completed and followed-up. However, no major changes of the main structure of the work seem to be called for at this point.

2. INTRODUCTION

2.1. Purpose of the evaluation

European roads are much safer today than ever before and the EU is the safest region world-wide. Still, every year more than 25,000 people die in road traffic crashes in the EU and more than 200,000 are reported to be seriously injured. Road crashes remain among the most common causes of death for those between 15 and 25 years old.

Road safety work is complex, with many factors playing a role in determining final outcomes. The occurrence and the severity of crashes depend on the behaviour of road users, vehicles and safety equipment, road infrastructure and the emergency response in the case of a crash.

Road safety is also a shared competence¹ with the majority of the every-day work done by Member States on national and local level. The EU contributes where there is added value of cooperation and EU-level harmonisation. The EU work is guided by the framework document *Policy orientations on road safety 2011-2020*², from now on called the Policy orientations. Also NGOs, companies/industry and citizens influence road safety, and external factors such as economic development or weather conditions may also make a difference.

In spite of this challenging context, it is important to regularly evaluate, to the extent possible, the efficiency, effectiveness and relevance of EU road safety policy. This interim evaluation of the Policy orientations takes stock of progress to date. It provides an analysis of the current road safety situation to clarify whether the policy framework still covers the main problems. A general assessment is made of indicators of relevance, effectiveness, efficiency, coherence and EU added value of the Commission road safety policy framework.

The report will provide transparency about the Commission's work in this policy area. It will also provide information that may be used in decisions on upcoming initiatives, for example guiding the preparations for the next strategy period.

The evaluation is carried out by the Commission road safety unit, with the support of a technical study by an external expert and in consultation with a wide range of road safety partners.

2.2. Scope of the evaluation

This interim evaluation of the Policy orientations takes stock of the progress so far on the 16 actions mentioned in the policy framework document (see Table 1), mapping outputs and implementation and to the extent possible also indicators of results.

A wider but less detailed discussion is also included on the overall road safety developments linked to the strategic target of the Policy orientations: reducing the number of road deaths in the EU by half until 2020.

The change in the number of road deaths during the period 2010-2014 is not primarily explained by the actions within the Policy orientations, not least because of the long implementation and lead times of most EU actions. Instead, the decrease of road deaths

¹ Treaty on the Functioning of the European Union, Article 91c

² Commission Communication, *Towards a European road safety area: policy orientations on road safety 2011-2020*, COM(2010)389 final, Brussels, 20 July 2010

and the reduced number of serious road traffic injuries is more likely the result of actions at Member State and local level combined with EU actions during the last decade that have an effect only now. The analysis on the strategic target for 2020 will therefore also include some discussion on previous EU efforts and possible external contributing factors.

There is no in-depth evaluation of individual legislative acts under the Policy orientations. Such evaluations are carried out separately. This interim evaluation will focus on a holistic approach, addressing the complete set of actions at a more general level.

The evaluation also does not cover in detail any Commission road safety actions beyond the 16 actions proposed in the Policy orientations. It does not make any prognosis on possible effects from the actions under the Policy orientations that are not yet completed.

3. BACKGROUND TO THE INITIATIVE

Road safety can be approached in two main ways: attempting to prevent serious traffic crashes from happening ("active safety") and attempting to reduce the severity of the crashes that cannot be prevented ("passive safety").

The occurrence of road traffic crashes depends on the behaviour of the road users (e.g. intentional risk-taking or unintentional mistakes), the conditions of the roads (inherent such as safety design, maintenance and permitted speeds or external such as temporary weather situations) and the condition and equipment of vehicles.

The severity of the crash outcome depends on the safety and crash protection quality of roads, the vehicles and road users involved, the safety equipment and the extent of its use and on the time and quality of the emergency response.

Since there are many causal factors involved, many different types of actions are required in order to address the problem effectively. The responsibility for taking action is shared. Some of these actions are best done on local or national level whereas others are more efficiently dealt with in cooperation across the borders.

3.1. EU road safety policy framework before 2010

In 2001, the Commission first announced its intention to set an ambitious goal to reduce the number of people killed by half between 2001 and 2010. The 2001 Transport White Paper presented the Commission ambition to "marshal efforts around the target of halving the number of road deaths over that period".³

The strategic target was intended as a tool for benchmarking and comparison between Member States and for mobilising partners to join the challenge and to step up road safety efforts at all levels. The strategic target was adopted to confirm the EU commitment to an important policy area. For all these reasons, setting strategic road safety targets is also considered an international best practice.⁴

The target was not legally binding on Member States nor committing the Member States to any action. The Commission acknowledged that the reaching of the target would primarily depend on the actions on national level and Member States were encouraged to voluntarily take on the challenge.

³ Commission White Paper: *European transport policy for 2010: time to decide*, COM(2001) 370 final, Brussels 12 September 2001

⁴ International Organisation for Standardisation, Road traffic safety (RTS) management systems — Requirements with guidance for use, ISO 39001:2012(E); World Health Organisation, Global status report on road safety 2013, p.27

The European Parliament⁵ and the Council⁶ endorsed the target proposal in 2003.

The strategic target for 2001-2010 was then confirmed in the European Road Safety Action Programme published in 2003.⁷ This document presented the Commission's intention to monitor and report on the progress towards the target and it described in further detail the performance indicators to be used for monitoring results. The EU actions in support of the road safety target for 2001-2010 included soft measures such as information campaigns and data analysis and legislative action on for example updated rules for driving licencing, infrastructure safety management, and training and qualification of professional drivers.

Annex 1 summarises the EU road safety legislation in place at the baseline year 2010. Out of these 19 main road safety Directives and Regulations, seven only apply, partly or in full, after 2010. These acts (Directives on driving licences, tunnel safety, roadside inspections of commercial vehicles and ITS deployment and Regulations on vehicle approval and type approval for the safety of motor vehicles) are expected to produce impact during the current evaluation period. Among these, aspects of the Directive on tunnel safety and the Regulation on type approval for the general safety of motor vehicles are still not fully applied at the time of this evaluation and are expected to continue to add road safety benefits during the second half of the strategy period.

During the period 2001-2010, road fatalities decreased by 43%. This was not entirely in line with the target but still a substantial improvement. The progress was especially impressive considering the accession of twelve new Member States during that period.

3.2. EU road safety policy framework after 2010

The contributions by the Commission during the current decade are guided by the *Policy orientations on road safety 2011-2020*. There are two main components of this framework: 1) a strategic, aspirational target for the total EU road safety result, with the total number of road fatalities as performance indicator, and 2) a list of 16 proposed Commission actions divided under seven focus areas or operational objectives (see list below).

A strategic target: halving the number road deaths

The EU 2020 road safety objective is primarily an aspirational and strategic target. The aim is to halve the number of road deaths over time, with 2010 as the baseline year. The target is not binding on EU Member States and it is not in conflict with separate target setting by Member States on national level. The intention to strive towards this target was announced by the Commission in the Policy orientations in 2010 and confirmed in the Transport White Paper⁸ the following year.

The target set in 2010 was not based on an empirical study of what would be realistic considering trends, contributing factors and intervention sets. Instead, an ambitious and easily communicated target level was set. The EU target was endorsed by the European Parliament⁹ and by the Council¹⁰.

⁵ European Parliament, Resolution on the Commission White Paper 'European transport policy for 2010: time to decide', P5_TA(2003)0054, Strasbourg 12 February 2003;

⁶ Council conclusions from Transport Council 9686/03, Luxembourg 5 June 2003

⁷ Commission Communication, *European Road Safety Action Programme. Halving the number of road accident victims in the European Union by 2010: A shared responsibility*, COM(2003) 311 final, Brussels 2 June 2003

⁸ Commission White Paper, Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system, COM(2011)144 final, Brussels, 28 March 2011

⁹ European Parliament resolution of 27 September 2011 on *European road safety 2011-2020* (2010/2235(INI))

¹⁰ *Council conclusions on road safety*, 3052th Transport, Telecommunications and Energy Council meeting, Brussels, 2-3 December 2010

This target can only be reached by a combination of actions on local, national and EU level. The 16 action proposals of the Policy orientations provide only one piece to the total puzzle and, as explained above, several of these are more likely to have an impact only in the next decade.

Seven focus areas and 16 proposed actions

The seven focus areas presented in the Policy orientations are:

- Education and training of road users
- Enforcement of road traffic rules
- Safer road infrastructure
- Safer vehicles
- Better use of modern safety technologies
- Serious injuries and emergency services
- Safety of vulnerable road users.

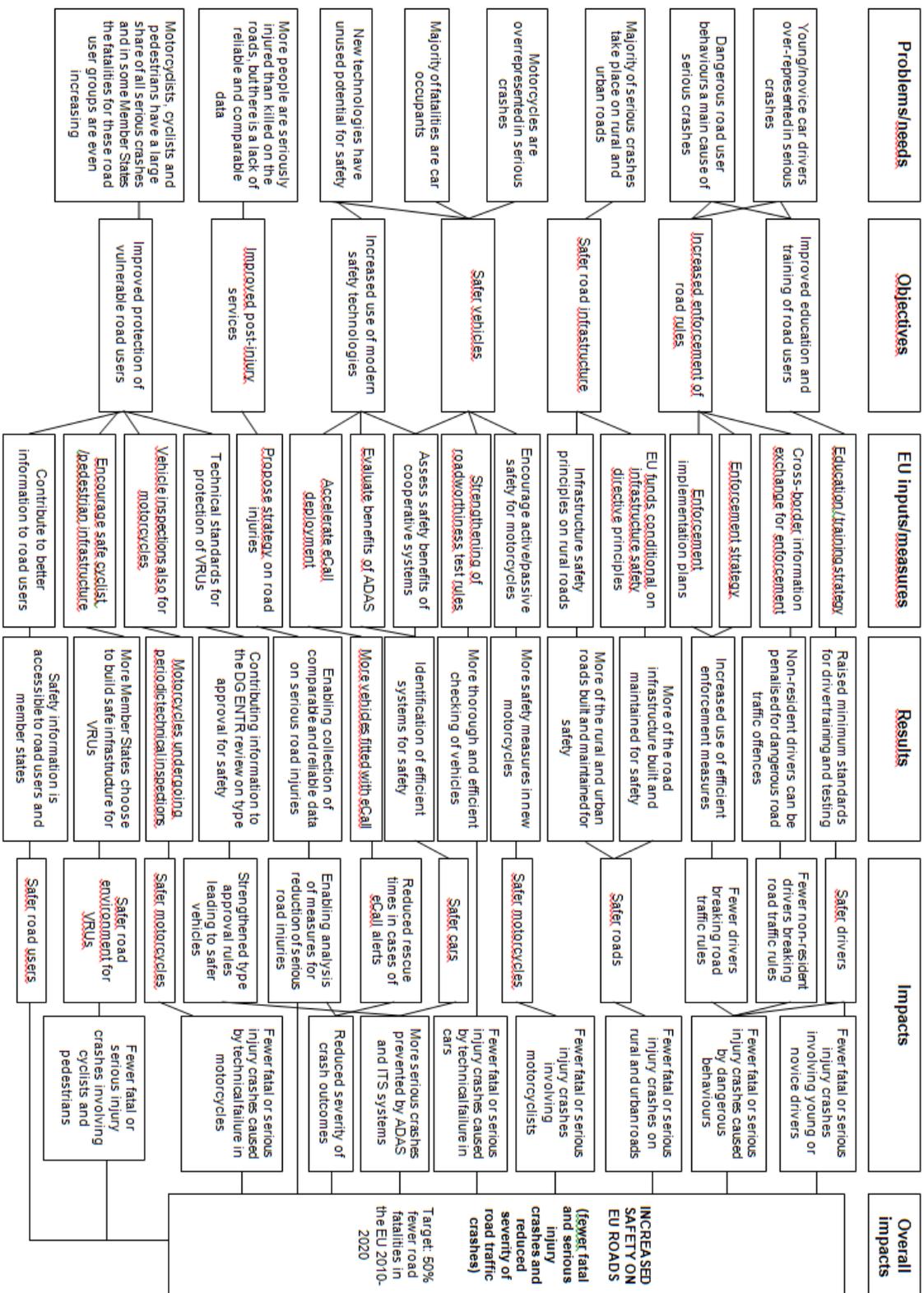
To complement the work done on the national level, the Commission also set out a number of proposed actions under each of the focus areas (see Table 1). The link between the operational objectives, the proposed actions and the problems they are meant to address is illustrated in Figure 1.

Table 1: Focus areas and 16 actions in EU policy framework 2011-2020

Focus areas	EU action
Education and training of drivers	1. Education/ training strategy
Enforcement of traffic rules	2. Cross-border information exchange for enforcement
	3. Enforcement strategy
	4. Enforcement implementation plans
Safer road infrastructure	5. EU funds conditional on infrastructure safety directive principles
	6. Infrastructure safety principles on inter-urban roads
Safer vehicles	7. Encourage active/ passive safety for motorcycles
	8. Strengthening of roadworthiness test rules
Modern technologies	9. Assess safety benefits of cooperative systems
	10. Evaluate benefits of Advanced Driving Assistance Systems (ADAS)
	11. Accelerate eCall deployment
Injuries and emergency response	12. Propose strategy on road injuries
Vulnerable road users	13. Technical standards for protection of vulnerable road users
	14. Vehicle inspections also for motorcycles
	15. Encourage safe cyclist/pedestrian infrastructure
	16. Contribute to better information to road users

The actions are intended to be completed by 2020. Several Commission DGs are involved in the execution of the tasks.

Figure 1: Intervention logic



3.3. Road safety situation 2010-2014

In 2010, the total number of road deaths was 31,500¹¹ for the 27 Member States and Croatia¹². The average road fatality rate in the EU was 63 deaths per million inhabitants.

The total number of road deaths in 2013 was 26,000. This corresponds to an average EU road fatality rate of 51 deaths per million inhabitants.

Still a high number of road deaths.

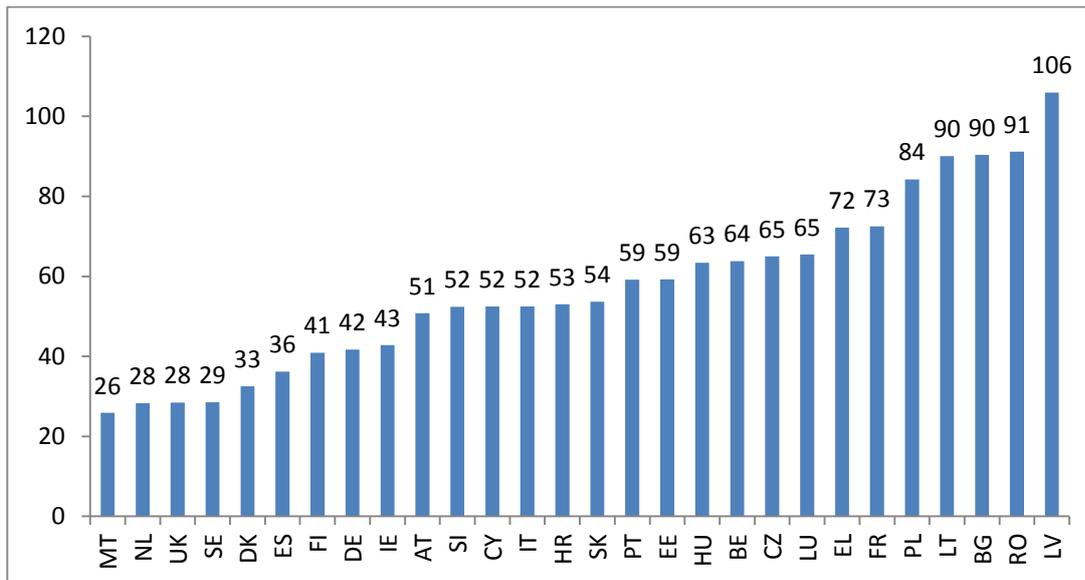
The preliminary reported number of road deaths for 2014 is 25,700¹³, still equal to 51 deaths per million inhabitants. In total, the number of road deaths in the EU decreased by 18.4% between 2010 and 2014.

Results per Member State

In 2010, four countries had a road fatality rate of more than 100 dead per million inhabitants: Greece, Bulgaria, Latvia and Poland. The best performing Member States were Sweden, UK and the Netherlands with a road fatality rate of 28-32 deaths per million inhabitants.

In 2014, four countries had a road fatality rate of more than 90 deaths per million inhabitants: Lithuania, Bulgaria, Romania and Latvia. The best performing Member States were still Sweden, UK, the Netherlands and Malta with less than 30 deaths per million inhabitants.

Figure 2: Fatality rates per Member States, 2014 (preliminary)



Although the road safety levels in the Member States vary substantially, the differences between Member States seem to decrease over time. In 2010, the average of the three highest fatality rates was 3.7 times higher than the average of the three lowest rates. In 2014 the average of the highest three fatality rates was down to 3.4 times the average of the three lowest.

The biggest change over time is seen at the higher end of the fatality rate scale. While the top three performers only decreased their average from 30 to 28 deaths per million inhabitants in these four years, the average of the highest three fatality rates dropped

¹¹ The source for all road safety data in this report is the CARE database, if not stated otherwise

¹² The data from Croatia is included in this chapter although Croatia was not an EU Member State in 2010, for the sake of easy comparison between the baseline year and 2014.

¹³ As reported in March 2015; the figures for 2014 are preliminary and rounded.

from 111 to 95 deaths per million inhabitants. It should be noted however that the slow-down in the road death reduction among the top performers comes at a time when they have already achieved historically low road fatality rates – the lowest rates world-wide.

Road user types

In 2010, 48% of those who died were car occupants, although a car was involved in 75% of all fatal crashes. 20% of the road victims were pedestrians, 15% motorcyclists and 7% cyclists. The motorcyclists were over-represented compared to the number of registered vehicles: there were 11 motorcyclist deaths per 100,000 registered motorcycles compared to 5 car occupant deaths per 100,000 registered cars¹⁴. This reflects the fact that the motorcycle rider is less protected in the event of a crash.

More than half of fatalities are car occupants and motorcyclists but pedestrian and cyclist deaths decreased less than average.

Only 2% of those who were killed on EU roads were occupants of a heavy goods vehicle and 3% were drivers or passengers in a goods vehicle of less than 3.5 tonnes. The heavy goods vehicles made up 11% of the registered vehicle fleet¹⁵ but were involved in 15% of the fatal crashes. In 9% of the fatalities a goods vehicle below 3.5 tonnes (a van) was involved. The heavy goods vehicles are however very safe for their drivers and they are involved in fewer than average fatal crashes per kilometre driven.

A heavy goods vehicle is involved in 15% of all fatal crashes.

In 2013¹⁶, 45% of those who died were car occupants (car occupant deaths decreased by 22% over the period), 22% were pedestrians (pedestrian deaths decreased by only 11% over the period), 15% motorcyclists (motorcyclist deaths decreased by 17% over the period) and 8% cyclists (cyclist deaths decreased by only 3% over the period). The goods vehicles occupants' share of road deaths remained the same, with the total number of fatalities decreasing by approximately 9%.

Table 2: Road user groups: development 2010-2013

Road user group	Fatality decrease 2010-2013	Share of all road deaths
Car occupants	-21%	45%
Motorcyclists	-17%	15%
Pedestrians	-11%	22%
Cyclists	-3%	8%
Goods vehicles >3.5 tonnes	-9%	2%
Other	-21%	8%

The share of fatal accidents in a crash involving a car (75%) or a heavy goods vehicle (15%) remained the same over the time period.

Road types

38% of all fatalities occurred in urban areas and 55% on inter-urban roads in 2010. The motorways were the safest roads with only 7% of all road deaths; the motorways are designed to better accommodate high speeds and large flows of traffic than other roads. These shares of road fatalities per road type remain the same in 2013.

Most deaths still are in urban areas and on inter-urban roads.

¹⁴ Number of registered vehicles from European Commission *EU transport in figures, Statistical pocketbook 2014*: Stock of registered vehicles (cars, motorcycles, buses, goods vehicles)

¹⁵ European Commission *EU transport in figures, Statistical pocketbook 2014*: Stock of registered vehicles (cars, motorcycles, buses, goods vehicles)

¹⁶ The latest available detailed statistics.

Age groups

In 2010, children under the age of 15 accounted for less than 3% of all the road fatalities. In 2013, children under the age of 15 made up 15.6% of the total population but only 2% of all road fatalities. The road fatality rate for children younger than 15 years decreased from 11 to 8 deaths per million children from 2010 to 2013.

The young aged 15-24, made up almost 20% of all road fatalities in 2010. Among car driver fatalities, the age aspect was particularly striking, with 22% of all fatally injured car drivers being young/novice drivers, 18-24 years old. In 2013, those between 15 and 24 years made up 11.5% of the total population and 17% of all road fatalities (20% of all car driver fatalities). The fatality rate for the age group 15-24 fell from 102 to 76 deaths per million from 2010 to 2013.

This means that the age group with the highest risk is still the young group, but that young people also had the best improvement rate over this time period.

Young are still over-represented; the share of elderly increases.

In 2010, 22% of all killed in traffic were 65 years or older. In 2013, the share of elderly among road fatalities had increased to 25% although they only make up 18% of the total population. This gives a road fatality rate of 71 deaths per million elderly compared to 77 deaths per million in 2010. The risk difference between the elderly and the young is therefore now substantially reduced.

Table 3: Age groups: share of all road deaths and share of total population

Age group	Share of fatalities	Share of population	Change in number of fatalities 2010-2013
<15	<3%	16%	-25%
15-24	17%	11%	-28%
25-49	36%	35%	-22%
50-64	19%	20%	-13%
>65	25%	18%	-5%

Gender

Looking at the gender aspect, in 2010 76% of those killed on the roads were male. Among car driver fatalities, the male over-representation is even stronger with 82% of the victims being male. These differences in mortality rates for men and women remain the same in 2014.

The European Transport Safety Council analysed data from Sweden, the Netherlands and the UK that showed that the large differences in male and female mortality rates remain even after taking into consideration the fact that men use the roads more than women¹⁷, indicating that the differences are linked to gender-related behaviour patterns.

Men are still over-represented as road fatality victims.

People with disabilities

A group of potentially vulnerable road users are people with different kinds of disabilities. Road infrastructure can be designed to remove obstacles and dangers to all citizens including people with e.g. reduced mobility, eyesight or hearing. There is currently insufficient data available to assess the road traffic risk exposure for people with disabilities but this area might require additional analysis in the coming years.

¹⁷ European Transport Safety Council, *Risk on the Roads – A Male Problem?*, PIN Flash 25, 15 June 2013

Serious injuries

The reported number of serious injuries in 2010 was slightly above 250,000¹⁸. This means that for every reported fatality, there were almost 8 seriously injured in road traffic.

Most fatal accidents occur outside urban areas but for serious injuries the figures are reversed. More than half of all serious injuries occur inside built-up areas.

45% of all seriously injured persons are vulnerable road users (pedestrians, cyclists, powered two-wheeler drivers). Within urban areas the vulnerable road users are almost 67% of those who are seriously injured.

The young and the elderly are over-represented among the seriously injured in road crashes and especially the elderly pedestrians.

Serious injuries decrease less than the fatalities and there are 8-9 reported serious injuries for every road death.

Table 4: Injuries and fatalities, development 2010-2014

	2010	2014 (preliminary)	% change 2010-2014
Serious injuries	251,300	219,700	-13%
Fatalities	31,500	25,700	-18%

The estimated number of serious injuries in 2014 was just under 220,000 – that is 8-9 seriously injured for every road traffic fatality. The number of reported serious injuries decreased by only 13% from 2010 to 2014. A reduction of serious injuries is not in contradiction to a reduction of fatalities; all avoided fatalities do not instead result in serious injuries.

Causal factors

There are many road safety factors causally related to the number and risk of death and serious injury. Among the most common crash cause factors are speed, drink/drug-driving, and failure to wear a seatbelt. Technical failure in vehicles will also be dealt with in this section since this was a main problem targeted by the Policy orientations in 2010.

Information on these factors is not regularly collected in any comparable way across the EU but some estimates are made and discussed in the following paragraphs.

- Speeding

Excess speed (above speed limits or a speed not adapted to the current road conditions) is estimated to be a primary contributing factor in about one third of all fatal road crashes in the EU.¹⁹

The progress regarding speeding is mixed. On motorways, improvement was reported from the countries monitoring speed levels. The European Transport Safety Council estimates that 10-50% of all drivers exceed the speed limit on motorways in the reporting countries²⁰. In 2008 the figure was 10-70%²¹.

¹⁸ All references to the number of serious road traffic injuries in this report are based on the old reporting format; data under the new common EU definition of serious injury was not yet available at the time of this evaluation.

¹⁹ OECD, *Speed Management*, 2006

²⁰ European Transport Safety Council, *Ranking EU progress on car occupant safety*, PIN Flash report 27, April 2014, p.18

²¹ European Transport Safety Council, *Traffic Law Enforcement across the EU, Tackling the Three Main Killers on Europe's Roads*, February 2011, 9 reporting countries

On inter-urban roads, some countries decreased their average speed while it increased in other. The estimate for 2012 was that 10-60% of all drivers were speeding in the reporting countries²². In 2008, the figure was 30-70% of the drivers.²³

In urban areas it was estimated that 30-60% of drivers exceed speed limits in 2012²⁴, compared to the more diverse results from 2008 with 10-80% of drivers reported to speed.²⁵ Speeding is especially dangerous inside urban areas with frequent interactions between motorised and vulnerable road users. In this environment, even a small increased speed makes a big difference for the survival chances of a pedestrian in a collision. The continued high rate of reported speeding in urban areas is therefore a main concern.

The highest frequency of speeding is reported from urban areas and speeding in urban areas has not clearly decreased over time.

Table 5: Share of drivers estimated to exceed speed limits

	2008	2012
Motorways	10-70%	10-50%
Inter-urban roads	30-70%	10-60%
Urban areas	10-80%	30-60%

The latest EU-wide report on the share of non-resident drivers in speeding offences found a range from 2.5% to 30% in different Member States. In many Member States, non-resident drivers are over-represented in speeding offences. For example, in France the non-resident drivers were estimated to make up 5.5% of the traffic but up to 15% of all speeding offences.²⁶

- Drink driving

Alcohol is estimated to be a contributing factor in approximately 25% of all fatal crashes.²⁷

Drink-driving trend reports differ between Member States.

The European Transport Safety Council has compiled Member States' reports about share of road deaths attributed to drink driving, over time. These country reports are not comparable across the EU since the definitions vary between Member States. However, the trend over time for each Member State could be an indicator of developments in that country. The report found that, in the period 2010-2012, 8 Member States reported a decreased number of fatal traffic crashes attributed to drink-driving. 5 Member States reported an increased number. 15 Member States did not collect or report data for this time period. There is therefore not enough data to draw any clear conclusions on the development of drink-driving as a cause of road fatalities in the EU.

Drug-driving is also a concern but reported as less frequent than the alcohol-related offences for the EU as a whole, with large differences among Member States.²⁸

²² European Transport Safety Council, *Ranking EU progress on car occupant safety*, PIN Flash report 27, April 2014, p.18

²³ European Transport Safety Council, *Traffic Law Enforcement across the EU, Tackling the Three Main Killers on Europe's Roads, February 2011*, 8 reporting countries

²⁴ European Transport Safety Council, *Ranking EU progress on car occupant safety*, PIN Flash report 27, April 2014, p.18

²⁵ European Transport Safety Council, *Traffic Law Enforcement across the EU, Tackling the Three Main Killers on Europe's Roads, February 2011*, 8 reporting countries

²⁶ Commission Staff Working Document *Accompanying the proposal for a Directive facilitating cross-border enforcement in the field of road safety: Full impact assessment*, SEC(2008)351/2, p.10

²⁷ DaCoTA, *Alcohol, Deliverable 4.8a of the EC FP7 project DaCoTA*, 2012, Brussels; Ecorys/COWI, *Study on the prevention of drink-driving by the use of alcohol interlock devices*, 18 February 2014, p.34

²⁸ Almost half as many drivers are estimated to drive under influence of illicit drugs as under influence of alcohol: *Druid project, Final Report: Work performed, main results and recommendations*, 1 August 2012, p.80. No reliable figures are available on the number of fatal crashes caused by drug-driving in the EU.

- Seat belt use

The European Transport Safety Council estimated that around 900 people per year could have survived road traffic crashes if they had used seat belt properly.²⁹

The European Transport Safety Council compared seat belt wearing rates for 2005 and 2012 in 22 EU countries³⁰ and found that significant improvements have been made in most countries for seat belt wearing in the front seat. The Czech Republic even reported an improvement by impressive 26 percentage points over this time period. Italy and Greece however reported decreased use of seat belts. For the rear seat, the wearing rate also improved but to a much lower average. The rear seat belt wearing rate varies from 21% (Greece) to 98% (Germany) with several Member States reporting a much lower seat belt use rate for rear seats compared to front seats. Still, the main conclusion for seat belt wearing is that the situation has improved over time.³¹

Seat belt use is generally reported to be improving.

- Technical failure in vehicles

Older vehicles were reportedly involved in accidents twice as often as newer vehicles and studies assessed that technical defects of a vehicle were a contributing factor in at least 6% of all accidents³². 8% of the accidents involving motorcycles are reportedly linked to technical defects.³³ There is no reliable data showing any change over time for these rates.

Problem summary 2013-2014

Over-all problem:

- High number of fatal and serious road traffic crashes

The largest share of the problem:

- Car occupants and motorcyclists (together 60% of all fatalities; cars involved in 75% of all fatal crashes;
- Pedestrians (22% of all fatalities)
- Heavy goods vehicles (involved in 15% of all fatal crashes)
- Inter-urban roads (55% of fatalities); urban areas (38% of fatalities)
- Men (76% of all fatalities)
- The serious road traffic injuries (estimated 8-9 times as many as the fatalities)

The highest risk per number of vehicles/people:

- Motorcyclists, 11 deaths per 100,000 registered motorcycles
- Young (15-24 years) 76 deaths per million young people
- Elderly (>65 years), 71 deaths per million elderly people

The weakest improvement since 2010:

- Pedestrian and cyclist fatalities (decreased by 11% and 3% respectively)
- Elderly fatalities (decreased by 6%)
- Serious injuries (decreased by 13%)
- Speeding, especially in urban areas

²⁹ European Transport Safety Council, *Ranking Progress on EU Car Occupant Safety PIN Flash Report 27*, 2014, Brussels

³⁰ All EU Member States do not collect data on seat belt wearing rates regularly or at all. There is no EU obligation to report such data.

³¹ European Transport Safety Council, *Ranking EU progress on car occupant safety*, PIN Flash report 27, April 2014

³² Commission Staff Working Document: *Impact assessment on the Roadworthiness package*, SWD(2012)206 final 2, Brussels, 13 July 2012, p.10

³³ Commission Staff Working Document: *Impact assessment on the Roadworthiness package*, SWD(2012)206 final 2, Brussels, 13 July 2012, p 8

4. METHODOLOGY

The evaluation exercise is primarily based on qualitative analysis, supported where possible and appropriate by quantitative data on identified indicators.

The evaluation is based on several sources of information. A desk review of literature, research and fact reports has been made³⁴. Previous EU evaluations and impact assessments of individual legislative acts have been gone through and a compilation of road crash data from the CARE database has been made. National road safety action plans and road safety strategies submitted to the Commission have been analysed. A supporting technical study and a consultation of a wide range of road safety stakeholders also provided inputs. The evaluation has been completed internally within the European Commission.

The technical study was performed during three months by an external road safety expert, Ms Jeanne Breen³⁵. The study assessed what has been achieved so far by the EU, whether this could be considered sufficient to meet the 2020 target and in what areas improvements can be made. The study made a qualitative analysis of results, interventions and institutional management, with some quantitative data analysis to support conclusions in relevant cases.

The consultation took place in the form of a half-day workshop on 17 November 2014³⁶ with around 50 participants including interest groups, researchers, industry umbrella organisations, victims' organisations and Member State representatives. It was complemented by a public invitation on the Commission road safety website for stakeholders to provide written comments. Specific questions related to the evaluation initiative were also discussed in the High Level Group on Road Safety³⁷ during its meeting in November 2014 in Rome.

An evaluation steering group with representatives of seven DGs and four units within DG MOVE have monitored the work, developed the evaluation questions and reviewed the draft reports.

Table 6: Evaluation questions

Evaluation questions	
Relevance	Is the strategic target of 50% reduction of road deaths still relevant and realistic with regard to the size and characteristics of road safety problems in the EU today?
	Are the seven strategic objectives of the Policy orientations on road safety still relevant in relation to the current main road safety problems and challenges?
	To what extent are the main EU initiatives for road safety still appropriate in order to address the main road safety problems and challenges? Are there any additional actions that could address the current problems and challenges of road safety?
Effectiveness	To what extent have the EU initiatives contributed to the decrease in the number of road fatalities (in total and for different road user groups, e.g. pedestrians, car drivers, motorcyclists, young road users, elderly, professional drivers) during the period under analysis?
	What external factors have hindered or helped the achievement of objectives?

³⁴ See section 8: List of references

³⁵ Jeanne Breen, *Road safety study for the interim evaluation of Policy Orientations on Road Safety 2011-2020*, 12 February 2015, the report is available at:

http://ec.europa.eu/transport/road_safety/pdf/study_final_report_february_2015_final.pdf;

http://ec.europa.eu/transport/road_safety/pdf/study_annexes_february_2015_final.pdf

³⁶ See meeting report and list of participants from the workshop in Annex 6

³⁷ High Level Group on Road Safety, as established following a request in the Council Resolution on a Community programme of action on road safety, 21 June 1991

Evaluation questions	
	What unintended positive and negative effects, if any, have been produced?
Efficiency	Were the (expected) effects obtained at a reasonable cost?
	Could the same results have been achieved at a lower cost by other initiatives?
Coherence	Do the EU road safety policy objectives contradict or complement other EU policy objectives (e.g. environmental, social or economic)?
EU added-value	To what extent could the results brought about by the EU actions have been achieved by Member States at national and/or regional level? Would it have been possible to achieve the same results without the EU intervention?

The following indicators and sources have been used to find answers to the ten evaluation questions.

4.1. Relevance

- *Is the strategic target of 50% reduction of road deaths still relevant and realistic with regard to the size and characteristics of road safety problems in the EU today?*

For the relevance, the first indicator is the number of total road deaths and their decrease since 2010. This reveals whether the target still corresponds to a substantial road safety problem. The second aspect of relevance is whether there are other substantial road safety problems not addressed by the target, comparing especially the number of road deaths with other road traffic crash outcomes. The results from a literature review on target setting generally and the inputs from the consulted stakeholders and the technical support study are also presented.

For the achievability of the target, the trend so far and the trend during last decades are looked at. The different developments in different countries and some possible influencing factors are discussed. The assessment of the technical support study is quoted.

- *Are the seven strategic objectives of the Policy orientations on road safety still relevant in relation to the current main road safety problems and challenges?*
- *To what extent are the main EU initiatives for road safety still appropriate in order to address the main road safety problems and challenges? Are there any additional actions that could address the current problems and challenges of road safety?*

The main problems of road safety generally (number of fatal and serious crashes and the severity of crash outcomes for all victim groups) and the new or changed problems identified in the comparison of the 2014 with the 2010 situation are matched against the target issues identified for the EU actions and operational objectives.

The matching reveals whether all of the identified road safety problems in 2014 are covered by an action/objective and whether any of the actions/objectives no longer corresponds to a relevant problem.

4.2. Effectiveness

- *To what extent have the EU initiatives contributed to the decrease in the number of road fatalities (in total and for different road user groups, e.g. pedestrians, car drivers, motorcyclists, young road users, elderly, professional drivers) during the period under analysis?*

To find out whether EU actions have been effective or not, a number of possible indicators are discussed. The difference between EU Member States and other countries

and the trend in countries becoming EU Member States is looked into. The development over time in the EU before and after the adoption of a common EU target is considered. The different developments for the set of road safety performance indicators (change over time for road types, road user types, age groups, gender and causal factors) are discussed together with comments on which positive or negative developments can potentially be linked to EU actions targeting this particular road crash aspect.

- *What external factors have hindered or helped the achievement of objectives?*

Three possible external factors are discussed: the financial crisis, the ageing population and the climate change. These were identified by the technical study.³⁸

The theoretical links between these three factors and road safety are discussed with the help of literature review findings. The change over time 2010-2014 for the external factors is then compared to the road safety general development and also on national level with 20 sample cases: the five Member States with the lowest fatality rate, the five Member States with the highest fatality rate, the five Member States with the highest road fatality decrease 2010-2014 and the five Member States with the lowest road fatality decrease 2010-2014.

- *What unintended positive and negative effects, if any, have been produced?*

Some likely unintended positive or negative effects identified in the literature review are discussed. Inputs and information from stakeholders on perceived effects other than road safety results are summarised and discussed; conclusions from the technical study are taken into account.

4.3. Efficiency

- *Were the (expected) effects obtained at a reasonable cost?*

To determine the costs for the overall target and general road safety improvement, a rough estimate is made on the EU road safety spending (based on allocated budget for the Commission road safety activities) and on Member States road safety spending (based on reports by other research projects).

Road safety work is also carried out by voluntary organisations, on local level and as part of projects where the money allocated is not marked or reported as road safety funding. Costs are also taken on by industry and transport enterprises, in research and innovation and by other entities such as schools or insurance companies. These costs cannot be assessed in a sufficiently reliable way for this evaluation, but can be assumed to be smaller than the road safety spending by Member States.

To determine the economic savings yielded by improved road safety, the most recent cost of life estimate for the EU Member States is used to calculate the costs of all road deaths in the years 2011-2014 and all reported serious injuries over the same time period.

To determine the costs for specific actions, expenditure primarily on EU level is identified. Also assessments on potential costs for implementation are mentioned, based on information from impact assessments and evaluations in the relevant cases. Information from Member States on actual implementation costs could not be accessed.

The economic savings as a result of the specific actions cannot yet be determined since they are not expected to have had a substantial impact on reduction of road deaths yet; this should instead be assessed in future evaluations.

³⁸ Jeanne Breen, *Road safety study for the interim evaluation of Policy Orientations on Road Safety 2011-2020*, 12 February 2015, p.21

- *Could the same results have been achieved at a lower cost by other initiatives?*

An assessment of possible alternative ways is made, discussing options such as "soft measures" instead of legislation.

4.4. Coherence

- *Do the EU road safety policy objectives contradict or complement other EU policy objectives (e.g. environmental, social or economic)?*

The links between the main road safety objective (reduced number of fatal road traffic crashes) and other relevant objectives are analysed with the help of a literature review on correlations and possible indirect effects between economic, environmental, social and road safety outcomes.

4.5. EU added-value

- *To what extent could the results brought about by the EU actions have been achieved by Member States at national and/or regional level? Would it have been possible to achieve the same results without the EU intervention?*

In this section, the possibility of achieving similar results without EU intervention is discussed. An assessment is made of the likelihood of creating the same EU-wide benefits without EU-level action.

4.6. Limitations – robustness of findings

This evaluation aims to take stock of progress made and to make assessments on some of the outcomes and results in the road safety area. Because the link between outputs and outcomes is quite complex, these assessments are done on the basis of a set of indicators and should be seen as pointing out a direction rather than as providing exact measurements.

The limitations of the sources and the reliability of outcomes are discussed below.

- *Complex links between outputs and outcomes*

The lead-times for EU actions are generally long and the interim evaluation comes too soon to expect to find measurable effects and impacts yet from the EU actions since 2010. This evaluation will therefore focus mostly on taking stock of the work completed so far. In addition, there will be some complementing general discussions on possible explanations to the developments 2010-2014.

Some actions have no direct and measurable impacts. For example driver training and road user information campaigns might have an effect on attitudes long after the action was completed and their impact will be difficult to isolate from other contributing factors.

The actions targeted at one road user group can yield effects for other road user groups, making the linking of actions to effect difficult. For example, speed enforcement is usually directed towards car drivers; yet the effect can also be to save lives of pedestrian and cyclists. Most road safety actions benefit all target groups rather than specifically aiming at a single group.

The EU performance indicators set for the strategy are also very limited. Although indicators might be found to support or discard the hypothesis that EU actions contribute to the reduced number of road deaths, it is not possible to define to which extent improvement might be attributed to EU actions.

- *Complexity of causal factors*

The complexity of causal factors in road safety creates a major challenge. For most road traffic crashes there are several contributing factors explaining the occurrence and the severity of the crash.

In-depth investigations to pinpoint crash causes are very costly and only performed in few cases by some Member States. For obvious reasons there is also no information on what was the reason a road crash did not take place.

In addition, several complex external factors are in play. The extent of their impact on the road safety outcomes is discussed in Chapter 6.2.2. below.

- *Lack of data and quality of data*

Another challenge is the lack of data. Many of the safety problems addressed by the Policy orientations are not measured and reported on, notably the contributing factors causing road traffic crashes. Comparable and reliable statistics on the numbers of vehicles, cyclists and pedestrians on the roads/streets, on the distances travelled by different road user groups or on dangerous behaviours by road users are not available.

There is a known problem of under-reporting and knowledge gaps especially regarding the serious injury crashes and regarding the road safety of the most vulnerable road users, pedestrians and cyclists.

There is little information on Member States' implementation beyond the transposition of legal acts. There is no complete information on the costs of road safety actions in Member States.

- *Level of generalisation*

Each serious road traffic crash has so many individual components that generalisations will not provide a complete picture. Yet, the data set used is too big to deliver anything more detailed than a general and broad analysis at this time. The generalisations in this study are made with this caveat in mind.

- *Time constraints*

This report has been produced in a substantially shorter time frame and with smaller human resources than originally planned for. The original evaluation mandate included a nine months' external study by a full evaluation team. The contract was however cancelled because no complying offers were received. Instead, a smaller scope in-house evaluation with a limited level of ambition and executed in only four months became necessary in order to keep the deadlines.

- *Preparing for future ex-post evaluation*

Several of these limitations will remain the same for later ex-post evaluation of the policy framework. The complexity of several intertwined causal factors and the difficulty of measuring the extent of impact from various parallel actions will remain a challenge also in future evaluations.

The ex-post evaluation will however have a larger data set to analyse, covering more years and therefore more likely to show significant trends and indicators of change.

To further reduce the limitations faced by this interim evaluation, future assessments could be planned with more generous time span to allow for more in-depth analysis and to enable a more thorough data gathering from Member States, notably regarding assessed costs.

5. IMPLEMENTATION OF EU ACTIONS SINCE 2010

This chapter summarises the state of play of the actions presented in the Policy orientations in the period 2010-2014. The Policy orientations identifies 16 concrete actions. The main milestones have been completed in three of these cases³⁹, although continued monitoring and follow-up of implementation will still be required. The other actions are considered to be ongoing or under preparation; some actions are of a nature to be on-going throughout the decade.

The completed actions concern legislation: the adoption of Directive 2015/413/EU facilitating cross-border exchange of information on road-safety-related traffic offences and the adoption of the package containing Directives 2014/45/EU on periodic roadworthiness tests, 2014/46/EU on registration documents and 2014/47/EU on technical roadside inspections.

The transposition date for the new cross-border enforcement directive is 6 May 2015⁴⁰ but most Member States should already have transposed the provisions following the earlier legislation from 2011. The transposition date for the roadworthiness package is 20 May 2017.

There is no transposition requirement for Member States for any of the other completed actions under the Policy orientations.

5.1. Improve education and training of road users

Under the heading "Improved education and training of road users, the Policy orientations sets out one action: an education and training strategy in cooperation with Member States.

- *What has been done*

The work on education and training of road users is on-going. The focus is on the legal framework for European driving licences and on the initial qualifications and period training of professional drivers.

On 19 January 2013, Directive 2006/126/EC on driving licences entered fully into force and the new European driving licence format became mandatory for all Member States. Among the main novelties of the Directive are the minimum requirements for driving licence examiners and the strengthening of progressive access to the most powerful motorcycles. This is expected to benefit mainly young and novice drivers. In follow-up, the Commission has run transposition checks and has so far started infringement procedures against several Member States for insufficient implementation of the rules. By March 2015, 18 were still ongoing.

The Commission has adapted the annexes of the driving licence directive to scientific and technical progress. An important update was adopted in 2012 when obligatory testing on the competence to drive in a safe, economically and environmentally friendly way for truck and bus drivers (category C and D) was introduced.

There is an on-going dialogue with Member States on detailed rules on e.g. medical requirements for issuing of driving licences.

The Commission has published a website⁴¹ that would display all valid driving licence models in circulation in the EEA to help those responsible for exchanging licences and

³⁹ Crossborder information exchange for enforcement, strengthened roadworthiness rules and vehicle inspections also for motorcycles.

⁴⁰ Except for Denmark, Ireland and the UK who may postpone the deadline until 6 May 2017

⁴¹ http://ec.europa.eu/transport/road_safety/topics/driving-licence/models/index_en.htm

enforcing rules relating to them. This will facilitate the mutual recognition of all licences issued by EEA Member States.

For professional drivers, in July 2012 the Commission presented a report on the implementation of Directive 2003/59 on the initial qualification and periodic training of bus and lorry drivers.⁴² The report concluded that there are several differences among Member States in the application of Directive 2003/59/EC and in particular the fact that several Member States apply different exemptions may cause problems for intra-EU cross-border traffic.

An ex-post evaluation of Directive 2003/59 was conducted in 2013-2014. The evaluation found that there are problems with the current Directive concerning the provisions for mutual recognition, the content and structure of the training and the legal clarity e.g. on the Directive scope and the minimum age for drivers. The ex-post evaluation has subsequently been followed by an impact assessment study in 2014-2015. As part of the ex-post evaluation and the impact assessment a public consultation on the Directive was conducted between July and October 2013 and a stakeholder conference was held in Brussels in March 2014.

Work on an education and training strategy is still ongoing.

Directive 2003/59 has been implemented and transposed in all Member States and all new drivers have undergone initial qualification. Drivers with acquired rights have started to undergo periodic training. All drivers are expected to have obtained a Certificate of Professional Competence by 2016.⁴³

Three infringement procedures against Member States have been launched since 2011 on Directive 2003/59. Two of these cases had been solved by March 2015 and one was still ongoing.

- *What remains to be done*

Aspects linked to a road user education and training strategy for road safety will be continuously developed. This includes an upcoming study on specific aspects of driving licence legislation such as medical requirements and graduated risk exposure schemes for novice drivers. The review on the rules for training requirements for professional drivers will be finalised.

Investigation of options for promoting apprenticeship in the pre-licencing process as proposed in the Policy orientations remains to be completed.

The legislation presently in place and the Member States' application of it will be closely monitored throughout the strategy period.

5.2. Increase enforcement of road rules

In the area of traffic rules enforcement, the Policy orientations identifies three main actions: cross-border exchange of information in the field of road safety, a common road safety enforcement strategy including assessment of tools such as speed limiters and alcohol interlocks, and the promotion of national implementation plans.

⁴² Commission Report on the implementation of Directive 2003/59/EC relating to the initial qualification and periodic training of drivers of certain road vehicles for the carriage of goods or passengers, COM(2012) 385 final, 12 July 2012

⁴³ Panteia and Transport&Mobility Leuven, *Ex-post evaluation study report: Study on the effectiveness and improvement of the EU legislative framework on training of professional drivers*, 13 October 2014, p.62

- *What has been done*

The work on cross-border exchange of information for the enforcement of road traffic rules has progressed well. Directive 2011/82/EC on cross-border exchange of information for enforcement was adopted already in 2011. However, following a Court of Justice Decision on 6 May 2014, the Directive had to be re-tabled for adoption under a new legal basis with the new Directive 2015/413 adopted on 11 March 2015⁴⁴.

The cross-border enforcement directive has been adopted and is to be transposed, monitored and reported on.

The provisions of Directive 2011/82/EC remained in force until the adoption of the new Directive. The conformity check will be carried out on the basis of the new Directive.

The enforcement tools referred to in the Policy orientations have been investigated. One evaluation study on speed limiters⁴⁵ and one study on the alcohol interlocks⁴⁶ were finished in 2013. The conclusions on e.g. the required common standards for easy connection of alcohol interlocks into vehicles were submitted as inputs to the review of Regulation 661/2009 concerning type-approval requirements for the general safety of motor vehicles⁴⁷.

Speed limiter and alcohol interlock studies have been completed.

The national road safety enforcement plans have been analysed within the framework of the wider analysis of national road safety action plans and strategies. This initiative has been running in close consultation with the High-Level Group on Road Safety between 2012 and 2014. A working paper presenting a set of good practice examples collected from national road safety strategies was finalised in 2014 and is publicly available on the Commission road safety website⁴⁸.

Best practice examples for enforcement planning have been collected.

The Commission also cooperates closely with the European Traffic Police Network (TISPOL).

- *What remains to be done*

Further investigation of developments towards a European road safety enforcement strategy is to be done. An evaluation of Directive 2011/82/EC on cross-border exchange of information for enforcement is starting in 2015. Together with the development of enforcement guidelines the conclusions of the evaluation can feed into a common approach to enforcement of road traffic rules for safety in the Union.

Other enforcement tools in addition to the speed limiters and alcohol interlocks may become interesting for further study.

There is scope for continued work on national road safety planning including enforcement implementation plans; the working paper on good practice examples will be regularly reviewed and developed by the High Level Group on Road Safety.

⁴⁴ Directive (EU) 2015/413 of the European Parliament and of the Council of 11 March 2015 facilitating cross-border exchange of information on road-safety-related traffic offences, OJ L 68, 13.3.2015, p. 9–25

⁴⁵ Transport and Mobility Leuven, *Ex-post evaluation of Directive 92/6/EEC on the installation and use of speed limitation devices for certain categories of motor vehicles in the Community, as amended by Directive 2002/85/EC*, 9 August 2013, http://ec.europa.eu/transport/road_safety/pdf/vehicles/speed_limitation_evaluation_en.pdf

⁴⁶ Ecorys/COWI, *Study on the prevention of drink-driving by the use of alcohol interlock devices*, 18 February 2014, http://ec.europa.eu/transport/road_safety/pdf/behavior/study_alcohol_interlock.pdf

⁴⁷ Regulation 661/2009 concerning type-approval requirements for the general safety of motor vehicles, their trailers and systems, components and separate technical units intended therefor, 13 July 2009

⁴⁸ High Level Group on Road Safety, *Road safety planning: Good practice examples from national road safety strategies in the EU, Non-paper as food for thought and discussions*, 13 October 2014, http://ec.europa.eu/transport/road_safety/pdf/national-road-safety-strategies_en.pdf

5.3. Safer road infrastructure

The infrastructure actions in the Policy orientations include the promotion of infrastructure safety management principles for projects receiving EU funding and promotion of the application of these principles on a voluntary basis beyond the Trans-European Transport Network (TEN-T) motorways.

- *What has been done*

The infrastructure safety management principles are systematically promoted in the preparation of operational programmes and partnership agreement with Member States. The principles are also promoted in initiatives such as the best practice exchange between Member States in the High Level Group on Road Safety.

The infrastructure safety management principles will be continuously promoted also beyond the TEN-T motorways.

In order to establish a common approach and application of the EU infrastructure safety management principles also by international actors, the Commission has exchanged views with the development banks (notably the European Investment Bank and the European Bank for Reconstruction and Development). The European Investment Bank promotes the EU infrastructure safety principles as good practice in its projects beyond the Trans-European Transport Network and road safety audits have been included in the majority of road projects approved since 2010.⁴⁹

The application of the infrastructure safety management principles also on secondary roads is included as a good practice example in the working paper⁵⁰ on national road safety strategies and action plans published in 2014. Best practice exchanges are also regularly organised in the Committees on infrastructure safety management and tunnel safety.

In 2012 two grant projects working on the infrastructure safety management principles were concluded: Pilot4Safety⁵¹ on, for example, common agreed training curricula and tools for qualification of road safety personnel, and Whiteroads⁵² (concluded in 2012) on mapping of safe road stretches. A technical study on the comparative assessment of road tunnel risk analyses was done and circulated to the Member States in 2012.

- *What remains to be done*

The promotion of the infrastructure safety management principles and the tunnel safety principles will be an on-going task throughout the strategy period.

Evaluations of Directive 2008/96/EC on road infrastructure safety management and on Directive 2004/54/EC on minimum safety requirements for tunnels in the Trans-European Road Network are being finalised in 2015.

5.4. Safer vehicles

The Policy orientations presented two actions for the safety of vehicles: proposals on active and passive vehicle safety, especially for motorcycles, and strengthened roadworthiness testing.

⁴⁹ European Investment Bank, *The European Investment Bank and Road Safety*, May 2014, http://www.eib.org/attachments/thematic/road_safety_en.pdf

⁵⁰ High Level Group on Road Safety, *Road safety planning: Good practice examples from national road safety strategies in the EU, Non-paper as food for thought and discussions*, 13 October 2014

⁵¹ Pilot4Safety, Pilot project for common EU Curriculum for Road Safety experts: training and application on Secondary Roads, 2010-2012, http://ec.europa.eu/transport/road_safety/pdf/projects/pilot4safety.pdf

⁵² WHITEROADS, White spots in the Trans-European road network: a positive approach to road safety, 2010-2012, http://ec.europa.eu/transport/road_safety/pdf/projects/whiteroads.pdf

- *What has been done*

The vehicle type approval legislation has been revised for safety requirements of two- and three-wheel vehicles, which for example mandates the fitting of advance braking systems (combined braking or ABS) to motorcycles (Regulation 168/2013).⁵³

The motorcycle type approval rules have been developed for improved safety.

The new Roadworthiness Package⁵⁴ (Directive 2014/45, Directive 2014/46 and Directive 2014/47) was published on 29 April 2014. The package includes updated rules for the periodic roadworthiness testing of motorised vehicles, the roadside inspections of commercial vehicles and rules for the follow-up procedure in case of a failed roadworthiness test. It provides minimum safety standards for testing and for the inspectors.

New stronger roadworthiness testing rules have been adopted.

In follow-up to the roadworthiness package, a feasibility study on a Vehicle Information Platform was performed in 2014. The study provides an overview of different vehicle registers and roadworthiness testing registers in the Member States and assesses options and requirements for future models of data exchange between such registers.

Best practice guidelines on cargo securing (aspect to be controlled in roadside inspections of commercial vehicles) were established by an Expert Group in 2014 and published on the Commission website.⁵⁵

There is also regular interaction with the United Nations Economic Commission for Europe (UNECE) in order to promote alignment of this international legislation on roadworthiness inspections with the more ambitious EU standards.⁵⁶

- *What remains to be done*

The roadworthiness legislation about to enter into force will be closely monitored together with the Member States' implementation and enforcement of these rules. The deadline for transposition is May 2017; the date of application is May 2018.

5.5. Promote the use of modern technology to increase road safety

The three specific actions relating to modern technology are assessments of new cooperative systems for safety, evaluation of advanced driver assistance systems and the continued deployment of the eCall.

- *What has been done*

Road safety aspects of cooperative Intelligent Transport Systems (C-ITS) are discussed within the recently set-up the *C-ITS platform* which brings together stakeholders, experts and policy-makers with the aim to find solutions on issues hampering the coordinated deployment of cooperative ITS across the EU. The Commission has

Cooperative ITS for road safety is under discussion; much work yet to be done.

⁵³ Regulation 168/2013 on the approval and market surveillance of two- or three-wheel vehicles and quadricycles, 15 January 2013; http://ec.europa.eu/growth/sectors/automotive/legislation/motorbikes-trikes-quads/index_en.htm

⁵⁴ Commission press release, *Tougher vehicle testing rules to save lives*, 30 April 2014, http://ec.europa.eu/transport/road_safety/events-archive/2012_07_13_press_release_en.htm

⁵⁵ Commission report, *European best practices guidelines on cargo securing for road transport*, 8 May 2014, http://ec.europa.eu/transport/road_safety/vehicles/doc/cargo_securing_guidelines_2014.pdf

⁵⁶ United Nations Economic Commission For Europe, *Agreement Concerning The Adoption Of Uniform Conditions For Periodical Technical Inspections Of Wheeled Vehicles And The Reciprocal Recognition Of Such Inspections*, 13 November 1997

also contributed with road safety aspects to the EU-funded iMobility forum⁵⁷ on ITS development, and funded the iMobility Support project which aimed at raising awareness among the general public regarding safety-related ITS applications.

In follow-up to Directive 2010/40/EU on deployment of Intelligent Transport Systems (ITS) in road transport, Commission Delegated Regulations No 885/2013 and 886/2013 respectively on the provision of information services for safe and secure parking places for trucks and commercial vehicles and on the provision of road safety-related minimum universal information free of charge to users have been adopted.

Progress has been made in the implementing measures of the General Safety Regulation, regarding measures such as Electronic Stability Control, Advanced Emergency Brake Systems, Lane Departure Warning Systems, Tyre Pressure Monitoring Systems, seat belt reminders for cars, etc.⁵⁸ Vehicle electric safety provisions have been adopted.⁵⁹ Additional studies on the road safety benefits of wider deployment of these advanced driver assistance systems were carried out in 2013-2014 and the results summarised in a Commission Staff Working Document⁶⁰. A specific call for proposals covering automated road transport has been introduced in the draft 2016/2017 Horizon 2020 Work Programme which will cover in particular safety and end-user acceptance aspects of road automation in the transition towards its implementation and information and communications technology aspects relating to automation infrastructure.

Analysis has been done on a set of advanced driver assistance systems.

In June 2013, the Commission adopted two proposals that complete the Commission strategy on 112 eCall. The first concerned the deployment of the interoperable EU-wide eCall in the Public Safety Answering Points, in accordance with the specifications laid down by Delegated Regulation (EU) No 305/2013 adopted under Directive 2010/40/EU. The Decision aims to make the public infrastructure fit for eCall by 1 October 2017. It was adopted in May 2014⁶¹.

The development and wider deployment of eCall is on-going.

The second proposal under the framework provided by Directive 2007/46/EC (type-approval regulation) to mandate eCall in all new passenger cars and light goods vehicles went through the final stages of adoption at the time of this evaluation. The co-legislators agreed to have mandatory fitting of the eCall device in these categories of vehicles by 1 March 2018.

- *What remains to be done*

The Commission Delegated Regulation of 18 December 2014 supplementing Directive 2010/40/EU with regard to the provision of EU-wide real-time traffic information services is currently in the last step of procedure before coming into force.

There is still work to be done in the field of cooperative ITS and new technologies for safety. This is a dynamic area with quick technologic development and further studies or evolution of technical standards could become necessary between now and 2020.

Development of new advanced driver assistance systems can generate the need for further assessments on EU level.⁶² The current review of the General Safety Regulation

⁵⁷ www.imobilitysupport.eu, under the 7th Framework Programme

⁵⁸ http://ec.europa.eu/enterprise/sectors/automotive/documents/regulations/regulation-2009-661_en.htm

⁵⁹ Regulation (EU) 407/2011 on vehicle electric safety

⁶⁰ Commission Staff Working Document: *on the implementation of objectives 4 and 5 of the European Commission's policy orientations on road safety 2011-2020 – deployment of vehicle technologies to improve road safety*, SWD(2014) 297 final, 3 October 2014

⁶¹ Decision No 585/2014/EU on the deployment of the interoperable EU-wide eCall service, Brussels, 15 May 2014

⁶² <http://ec.europa.eu/DocsRoom/documents/9323>

and the Pedestrian Safety Regulation are expected to result in the preparation of a Communication in 2015 to the European Parliament and to the Council identifying a range of further possible measures on vehicle safety regulations.

The eCall legislation has to be implemented by Member States and car manufacturers. The Commission is obliged to report within three years after the date of application on whether the scope of the Regulation should be extended to other categories of vehicles, such as powered two-wheelers, heavy goods vehicles, busses and coaches, and agricultural tractors.

In addition, the Regulation requests the Commission to assess the need of requirements for an interoperable, standardised, secure and open-access platform. If appropriate and no later than two years after the entry into force of this Regulation, the Commission shall adopt a legislative initiative based on those requirements.

5.6. Improve emergency and post-injuries services

The Policy orientations stated that, in collaboration with Member States and other actors involved in road safety, the Commission should propose the setting-up of a global strategy of action on road injuries and first aid. The Policy orientations⁶³ and the subsequent 2001 Transport White Paper⁶⁴ also envisaged the adoption of a complementing EU target for the reduction of serious road traffic injuries.

- *What has been done*

The Council agreed in its Conclusions in December 2010⁶⁵ to the principle of establishing a specific quantitative target for the reduction of the number of injured people in due time. The European Parliament in 2011 called for an EU-level target for 40% reduction in the number of people suffering critical injuries from 2010 to 2020.⁶⁶ Several Member States have national targets on the reduction of serious road traffic injuries.⁶⁷

In 2013, a Commission Staff Working Document presented the prerequisites for adoption of an aspirational injury target. Two conditions were seen as necessary to be fulfilled before setting a target: identification of a common EU definition of serious road traffic injury and agreed methodologies for comparable and reliable data reporting from Member States.⁶⁸

Definition and methodology on serious road injuries is in place: prerequisites for setting a strategic target are fulfilled.

These prerequisites for target-setting are now fulfilled. An external study by a contracted road safety expert⁶⁹ on options for the definition of serious road traffic injury was completed in 2012. Discussions were then held with the Member State representatives in the High Level Group on Road Safety, discussing the external expert report and lessons learned in various Member States. A common EU definition of "serious road traffic injury" for data reporting to the CARE database was finally identified by the High Level Group in 2013. The definition is not formally adopted or legally binding on Member States; the Member States send the data

⁶³ Commission Communication, Towards a European road safety area: policy orientations on road safety 2011-2020, COM(2010)389 final, 20 July 2010, p.5

⁶⁴ Commission White Paper, Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system, COM(2011)144 final, Brussels, 28 March 2011

⁶⁵ Council conclusions on road safety, 3052th Transport, Telecommunications and Energy Council meeting, Brussels, 2–3 December 2010

⁶⁶ European Parliament resolution of 27 September 2011 on European road safety 2011-2020 (2010/2235(INI))

⁶⁷ For a list of Member States' national serious injury targets, see Annex 7.

⁶⁸ Commission Staff Working Document, *On the implementation of objective 6 of the European Commission's policy orientations on road safety 2011-2020 – First milestone towards an injury strategy*, SWD(2013) 94 final, Brussels, 19 March 2013

⁶⁹ Jeanne Breen, *High-level consultation on the development of the injuries strategy: Working document for the meeting of the High Level Group on road safety*, 27 June 2012

under the new definition on a voluntary basis for the sake of achieving comparable and reliable EU-wide data on the seriously injured.

The methodology for reporting this data was then developed together with Member States in the High Level Group on Road Safety and in the CARE Expert Group during 2013. Study visits and workshops for the new data collection methods were organised to familiarise the Member State authorities with the new methodology.

Member States have collected the first data under the new common definition during 2014 and the first comparable and reliable EU data will be available in 2015. Some Member States will need to phase in the new methodology over time and will in the meantime use a correction coefficient to be able to report data adapted to the new common EU definition. A similar phase-in period was necessary when the Member States adapted to the common definition of road fatality, now in use by all 28 Member States.

The new data is expected to provide a clearer picture of the serious injury problem in the EU. Studies on potential causalities of the serious injury crashes would also contribute required information to enable identification of effective actions for the next steps of work in this focus area.

The Commission has also provided grants to some European projects working on aspects of serious road traffic injuries: REHABIL-AID⁷⁰, LIVE⁷¹, MERCURIO⁷², RASIF⁷³.

- *What remains to be done*

A target on the serious road traffic injuries remains to be set.

Analysis of possible actions specifically targeting these injuries is yet to be made: preparations are under way for a study on this.

5.7. Protect vulnerable road users

The Policy orientations identify four action areas: technical standards for the protection of vulnerable road users; regulating vehicle inspections for powered two-wheelers; encouraging safe infrastructure for pedestrians and cyclists and contributing to information to and dialogue with road users.

- *What has been done*

The Commission has co-funded research projects such as VRUITS⁷⁴ under FP7 on providing recommendations regarding ITS applications for the improvement of the safety and mobility for vulnerable road users. The VRUITS project is still on-going. A more specific study assessing ITS applications with a safety impact for vulnerable road users was completed and published in 2011⁷⁵. An independent study was also carried out in 2014 to identify the benefits and feasibility of a range of new technologies

Projects and studies on technical standards benefitting vulnerable road user safety have been completed.
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⁷⁰ REHABIL-AID: REDucing the HArm and the Burden of Injuries and human Loss caused by road traffic crashes and Addressing Injury Demands through effective interventions, <http://rehabil-aid.seyp.teicrete.gr/>

⁷¹ LIVE project: Tools to injury prevention, http://ec.europa.eu/transport/road_safety/pdf/projects/live.pdf

⁷² MERCURIO: A European analysis of the road injuries management system with regard to the social and economic impact of emergency and post-injuries services on national finances and households, http://ec.europa.eu/transport/road_safety/pdf/projects/mercurio.pdf

⁷³ RASIF: Road Accident Serious Injures in Florence, http://ec.europa.eu/transport/road_safety/pdf/projects/rasif.pdf

⁷⁴ VRUITS: Improving Safety and Mobility of Vulnerable Road Users Through ITS Applications, <http://www.vruits.eu/>

⁷⁵ RappTrans et al, *ITS Action Plan: Safety and comfort of the Vulnerable Road User*, Amsterdam, 20 May 2011

for the protection of vulnerable road users.⁷⁶

A study on blind-spot mirrors was launched in 2011⁷⁷, providing inputs to the Commission Report on the implementation of Directive 2007/38/EC on the retrofitting of mirrors to heavy goods vehicles registered in the Community⁷⁸. The Report concluded that the Directive had been successfully implemented by EU Member States and that blind spot mirrors had contributed to the decreased number of vulnerable road users killed in a collision with a heavy goods vehicle between 2001 and 2009.

Studies of relevant technologies have been completed and the results summarised in a staff working document in 2014.⁷⁹ This information is used as inputs in the on-going review of Regulation 661/2009 concerning type-approval requirements for the general safety of motor vehicles⁸⁰

Regarding the technical vehicle inspections, the roadworthiness package adopted in 2014 (Directive 2014/45, Directive 2014/46 and Directive 2014/47) opens for EU-wide mandatory periodic roadworthiness inspections of motorcycles above 125 ccm over time. The roadworthiness package enters into force in May 2018.

EU rules on mandatory roadworthiness testing of motorcycles have been adopted.

The Commission launched in December 2013 the so called Urban Mobility Package⁸¹. The package consists of a Commission Communication and four technical Commission Staff Working Documents on different aspects of sustainable urban mobility planning. One major focus area in the package is road safety as an integral aspect of urban planning.⁸² This is especially relevant for the safety of vulnerable road users who are most exposed to risk inside urban areas.

Urban mobility package promotes safe infrastructure for pedestrians and cyclists.

An advisory group of distinguished road safety experts has been established to investigate how the urban road safety issues can be taken forward in follow-up to the Urban Mobility Package. The advisory group will launch guidelines to help urban authorities apply the recommended integration of road safety into the sustainable urban mobility plans.

The Commission also co-funded some more general European projects on motorcycle safety: Rider Scan⁸³ and MOSAFIM⁸⁴; and on cycling safety: BIKEPAL⁸⁵ and SAFECYCLE⁸⁶. A study on the specific road safety challenges for elderly road users was launched in 2014, with results expected by end of 2015. The 2014-15 Horizon 2020 work programme⁸⁷ included a topic covering vulnerable road users and accidentology. Projects will be supported covering safety aspects for cyclists and elderly road users (both as

⁷⁶ TRL, *Benefit and feasibility of a range of new technologies and unregulated measures in the field of vehicle occupant safety and protection of vulnerable road users*, March 2015

⁷⁷ Knight, I, *A study of the implementation of directive 2007/38/EC on the retrofitting of blind spot mirrors to HGVs*, 2011, http://ec.europa.eu/transport/road_safety/pdf/retrofitting_mirrors.pdf

⁷⁸ Commission Report on the implementation of Directive 2007/38/EC on the retrofitting of mirrors to heavy goods vehicles registered in the Community, COM(2012) 258 final, 4 June 2012

⁷⁹ Commission Staff Working Document on the implementation of objectives 4 and 5 of the European Commission's policy orientations on road safety 2011-2020 – deployment of vehicle technologies to improve road safety, SWD(2014) 297, Brussels, 3 October 2014

⁸⁰ Regulation 661/2009 concerning type-approval requirements for the general safety of motor vehicles, their trailers and systems, components and separate technical units intended therefor

⁸¹ http://ec.europa.eu/transport/themes/urban/urban_mobility/ump_en.htm

⁸² Commission Staff Working Document, *Targeted action on urban road safety*, SWD(2013) 525, December 17 2013

⁸³ RIDERSCAN: European scanning tour for motorcycle safety, <http://www.fema-online.eu/riderscan/>

⁸⁴ MOSAFIM: Motorcyclist road safety improvement through better performance of the protective equipment and first aid devices, <http://www.mosafim.eu/>

⁸⁵ BIKE PAL: Cyclist's best friend, <http://etsc.eu/projects/bike-pal/>

⁸⁶ SAFECYCLE: ICT applications for safe cycling in Europe, <http://www.safecycle.eu/>

⁸⁷ *Horizon 2020 Work Programme 2014-2015*, http://ec.europa.eu/research/participants/data/ref/h2020/wp/2014_2015/main/h2020-wp1415-transport_en.pdf

drivers/riders and as pedestrians), an innovative decision support system for road safety strategy based on analysis of road causation factors, and accidentology research related specifically to vulnerable road users.

For the action "information to citizens", the Commission has targeted its contributions beyond the group of vulnerable road users in a more general approach.

Safety information is provided to road users via several channels; this work will continue all strategy period.

Information is provided to citizens through communication tools such as an annual scoreboard brochure⁸⁸ and road safety status report ("Vademecum")⁸⁹, a continuously updated website⁹⁰, newsletters⁹¹, etc. The Commission also makes road safety data and analysis available via the European Road Safety Observatory⁹².

The "Going abroad" web page⁹³ was created in 2013. It contains information on traffic rules related to the eight traffic offences under the scope of Directive 2011/82/EC on cross-border information exchange for enforcement of traffic rules, covering the 28 Member States plus Switzerland, Norway and Liechtenstein. The objective was to provide easily accessible road safety information to all EU citizens. The webpage which is translated into all EU official languages became very popular with one of the largest number of visits on the website. There is also a smart phone application based on the information provided on this webpage which has been developed to allow wider use.

Information to the wider road safety community is provided through the web platform European Road Safety Charter⁹⁴. This website collects best practice examples and road safety action proposals from its more than 2,000 member organisations: local authorities, voluntary organisations, companies and others.

The road safety unit has run social media road safety weeks where the Commission social media channels have been dedicated to transmitting road safety messages, facts and figures during one week every year.

- *What remains to be done*

A further study on motorcycle accident causation was launched in late 2014 and will run for three years, performing 500 accident in-depth investigations.

The vulnerable road users are victims in all types of accidents and their safety depends not only on the targeted action for pedestrians and cyclists but also on the road safety work generally, including road user education, enforcement of rules, safety of infrastructure and safety of vehicles. To meet this operational objective, vulnerable road users must therefore be taken into account horizontally in all EU actions.

The work to encourage safe infrastructure for cyclists and pedestrians is an on-going task which will run through the entire strategy period.

Contributions to information to road users are also a continuous task: updates to website and information material will be done regularly.

⁸⁸ <http://bookshop.europa.eu/en/road-safety-2013-pbMIAB14001/>

⁸⁹ http://ec.europa.eu/transport/road_safety/pdf/vademecum_2015.pdf

⁹⁰ <http://ec.europa.eu/roadsafety>

⁹¹ http://ec.europa.eu/transport/road_safety/publications/index_en.htm

⁹² http://ec.europa.eu/transport/road_safety/specialist/erso/index_en.htm

⁹³ http://ec.europa.eu/transport/road_safety/going_abroad/index_en.htm

⁹⁴ <http://www.erscharter.eu/>

5.8. Other actions

In addition to the actions presented under the seven priority areas, the Policy orientations also mentions other tools for the road safety work: cooperation for exchange of best road safety practices; improved data collection and analysis; monitoring of implementation of the road safety acquis; and common principles for road crash investigations.

- *What has been done*

The Commission organises regular meetings of the High Level Group on Road Safety as a cooperation platform among Member States with active exchange of best practices. A working paper with good practice examples for road safety planning was compiled and published in 2014⁹⁵. Exchange of lessons learned is also continuously on-going in the different Committees and Expert Groups.

The Commission cooperates closely with the UN level working groups on issues of common interest, notably on the international agreements on safe transportation of dangerous goods.

Best practice exchanges among stakeholders are organised for example via the European Road Safety Charter⁹⁶ and in open conferences such as the European Road Safety Days⁹⁷. The Commission also supports cooperation projects, for example the European Youth Forum on Road Safety⁹⁸.

For exchange of experience and best practices between Member States and third countries, the Commission promotes Twinning⁹⁹ and TAIEX¹⁰⁰ projects to facilitate exchange of expertise in the form of study visits, workshops and training sessions. The Commission also contributes with technical expertise to other road safety related projects in the EU neighbourhoods: for example the road safety working group of the South East Europe Transport Observatory¹⁰¹, the Global Road Safety Partnership project¹⁰² in the Middle East and North Africa, and the EuroMed regional transport cooperation¹⁰³.

Promotion of good practices, monitoring of legislation and analysis of road safety are on-going tasks that will be carried out throughout the strategy period.

The Expert Group on the CARE database¹⁰⁴ meets regularly for updates and improvement of road safety data. There is also a close cooperation with Eurostat and the Organisation of Economic Cooperation and Development (OECD¹⁰⁵) on road safety data collection.

A set of common principles for in-depth road crash investigations was developed by the DaCoTA research project, co-funded by the EU. The project resulted in a published accident investigation methodology¹⁰⁶.

⁹⁵ High Level Group on Road Safety, *Road safety planning: Good practice examples from national road safety strategies in the EU, Non-paper as food for thought and discussions*, 13 October 2014, http://ec.europa.eu/transport/road_safety/pdf/national-road-safety-strategies_en.pdf

⁹⁶ <http://www.erscharter.eu/>

⁹⁷ http://ec.europa.eu/transport/road_safety/events-archive/2014_05_09_ersd_en.htm

⁹⁸ European Youth Forum on Road Safety: <http://ec.europa.eu/transport/eyfrs/>

⁹⁹ Twinning: http://ec.europa.eu/enlargement/tenders/twinning/index_en.htm

¹⁰⁰ TAIEX: http://ec.europa.eu/enlargement/tenders/taieux/index_en.htm

¹⁰¹ South East Europe Transport Observatory: <http://www.seetoint.org/>

¹⁰² Global Road Safety Partnership: <http://www.qrsroadsafety.org/>

¹⁰³ http://ec.europa.eu/transport/themes/international/regional_cooperation/euromed_en.htm

¹⁰⁴ http://ec.europa.eu/transport/road_safety/specialist/statistics/index_en.htm

¹⁰⁵ The OECD International Road Traffic and Accident Database (IRTAD),

<http://www.internationaltransportforum.org/irtadpublic/index.html>

¹⁰⁶ DaCoTA: Road safety data, Collection, Transfer and Analysis, <http://www.dacota-project.eu/>

The approach adopted in the *Smart Green and Integrated Transport Challenge* of Horizon 2020¹⁰⁷ is complementary to the aims of the Policy Orientations on Road Safety and will in itself be highly supportive to the policy through the innovation of research results that have been developed in this programme.

In addition a theme dedicated to transport safety has been launched in the draft Horizon 2020 Work Programme for 2016/2017 which considers protection of road transport users, infrastructure innovation to increase the transport system safety and studies the behaviour of transport users.

- *What remains to be done*

The promotion, analysis and monitoring tasks will be on-going throughout the strategy period.

Table 7: Summary of EU actions and outputs 2011-2014

EU action	Outputs by February 2015
Education/ training strategy	The Directive 2006/126/EC on driving licences entered fully into force on 19 January 2013.
	In 2012, obligatory testing on the competence to drive in a safe, economically and environmentally friendly way for truck and bus drivers (category C and D) was introduced.
	Periodic training for the Certificate of Professional Competence has started in most Member States
Cross-border information exchange for enforcement	Directive 2015/413 on cross-border information exchange for the enforcement of road safety related traffic offences adopted on 11 March 2015.
Enforcement strategy	Evaluation studies on speed limiters ¹⁰⁸ and alcohol interlocks ¹⁰⁹ were completed in 2013.
Enforcement implementation plans	Enforcement planning discussed in road safety plan guidelines document published 2013.
EU funds conditional on infrastructure safety directive principles	The infrastructure directive principles already apply mandatorily on TEN-T roads. No formal conditionality but strong encouragement of applying the principles beyond the TEN-T roads included in partnership agreements and operational programmes.
Infrastructure safety principles on inter-urban roads	Active promotion of the infrastructure safety management principles by the Commission in communication with stakeholders; Principle proposed as "best practice" in guidelines document published 2013
Encourage active/ passive safety for motorcycles	Regulation (EU) 168/2013 on type approval for two- and three-wheeled vehicles has been revised.
Strengthening of roadworthiness test rules	Updated Directive on periodic roadworthiness testing, Directive on roadside checks on commercial vehicles and Directive amending the Directive on the registration documents for vehicles adopted on 3 April 2014.
Assess safety benefits of cooperative systems	Staff working document on the assessment of benefits of such systems was adopted on 3 October 2014 ¹¹⁰ . A study on the benefits For road safety of Event Data Recorders was completed in 2014.
Evaluate benefits of ADAS	Regulation (EU) 407/2011 on vehicle electric safety has been adopted.
	The implementing measures of the General Safety Regulation ¹¹¹ :

¹⁰⁷ <https://ec.europa.eu/programmes/horizon2020/en/h2020-section/smart-green-and-integrated-transport>

¹⁰⁸ Transport and Mobility Leuven, *Ex-post evaluation of Directive 92/6/EEC on the installation and use of speed limitation devices for certain categories of motor vehicles in the Community, as amended by Directive 2002/85/EC*, 9 August 2013, http://ec.europa.eu/transport/road_safety/pdf/vehicles/speed_limitation_evaluation_en.pdf

¹⁰⁹ Ecorys/COWI, *Study on the prevention of drink-driving by the use of alcohol interlock devices*, 18 February 2014, http://ec.europa.eu/transport/road_safety/pdf/behavior/study_alcohol_interlock.pdf

¹¹⁰ Commission Staff Working Document on the implementation of objectives 4 and 5 of the European Commission's policy orientations on road safety 2011-2020 – deployment of vehicle technologies to improve road safety, SWD(2014) 297, Brussels, 3 October 2014

EU action	Outputs by February 2015
	Electronic Stability Control, Advanced Emergency Brake System, Lane Departure Warning, Tyre Pressure Monitoring Systems etc., have been adopted.
Accelerate eCall deployment	Decision No 585/2014/EU on the deployment of the interoperable EU-wide eCall service was adopted in May 2014. Proposal on mandatory fitting of eCall devices in passenger cars and light goods vehicles is being discussed.
Propose strategy on road injuries	Common EU definition defined, methodology for data reporting agreed and first new data to be reported during first half of 2015
Technical standards for protection of vulnerable road users	Analysis of emergency brake systems/pedestrian detection in the Staff working document adopted on 3 October 2014 ¹¹² .
Vehicle inspections also for motorcycles	Updated Directive on periodic roadworthiness testing adopted on 3 April 2014, provides for technical inspections of motorcycles or measures to the same effect.
Encourage safe cyclist/pedestrian infrastructure	Urban mobility package adopted on 17 December 2013 encourages urban authorities to ensure integrated road safety approach at all levels of sustainable urban mobility planning, with a focus on safe urban infrastructure for vulnerable road users.
Contribute to better information to road users	Regular publication of updated road safety facts and figures on the Commission road safety website ("European Road Safety Observatory").
	Setting up of the Going Abroad function of the Commission road safety website in October 2013 with information about road safety related traffic rules.
	Launch of the Going Abroad information app in June 2014.
	Running the web-platform "European Road Safety Charter"

6. ANSWERS TO THE EVALUATION QUESTIONS

6.1. Relevance

Questions:

- Is the strategic target on 50% reduction of road deaths still relevant and realistic with regard to the size and characteristics of road safety problems in the EU today?
- Are the seven strategic objectives of the Policy orientations on road safety still relevant in relation to the current main road safety problems and challenges?
- To what extent are the main EU initiatives for road safety still appropriate in order to address the main road safety problems and challenges? Are there any additional actions that could address the current problems and challenges of road safety?

This chapter will discuss first the relevance and achievability of the strategic target on road deaths. This is followed by a discussion on the relevance of the seven focus areas and the 16 actions of the Policy orientations. The target areas of the operational objectives are compared with the main current problems identified in Chapter 3.3 above, in order to check whether all main problem areas are addressed by the policy framework from 2010.

¹¹¹ Regulation (EC) No 661/2009 of the European Parliament and of the Council of 13 July 2009 concerning type-approval requirements for the general safety of motor vehicles, their trailers and systems, components and separate technical units intended therefor

¹¹² Commission Staff Working Document on the implementation of objectives 4 and 5 of the European Commission's policy orientations on road safety 2011-2020 – deployment of vehicle technologies to improve road safety, SWD(2014) 297, Brussels, 3 October 2014

Target relevance

The first question is: does the target correspond to a main road safety problem?

Looking at the size and characteristics of road safety problems in the EU today, as described in Chapter 3.3 above, road fatalities are still a significant problem. In 2014, almost 25,700 people were reported to have been killed on the roads. Road deaths remain a substantial societal problem.

The road fatality target addresses a substantial road safety problem.

Nevertheless it is questioned whether the target covers all main road safety problems. While the fatalities are the most serious outcomes, they are not the only serious result of road traffic crashes. As was shown in Chapter 3.3 above, for every reported road death there are now 8-9 reported serious road injuries in the EU, based on current reporting methods. Since the number of serious road traffic injuries does not decrease as quickly as the number of road deaths it could be considered that the current target and actions do not sufficiently address this problem.

The current target does not address the yearly 220 000 serious road traffic injuries.

The technical study identified the serious injuries as an important road safety problem not covered by the current road fatality target. The technical study also concluded that intermediate outcome targets were missing.¹¹³

Several of the respondents in the consultation of stakeholders, including researchers, road safety organisations and the European road traffic victims' organisation, requested an additional EU-level target on seriously injured.¹¹⁴

In order to have the same target decrease rate per year as with a 50% target over ten years' time, a target for the shorter period 2015-2020 needs to be set at -35%.

Finally, setting strategic targets for road safety performance is considered an international best practice.¹¹⁵ The mid-term evaluation of the EU road safety action programme for 2001-2010 found that the ambitious strategic target was one of the main EU added values of that programme, noting that "target setting is a valuable mean to get traffic safety on the political agenda and to monitor the progress that is made."¹¹⁶ A similar conclusion about the importance of the strategic target 2001-2010 was drawn in the ex-post evaluation of the road safety action programme.¹¹⁷

Target-setting is generally considered a useful tool.

Member States are not bound by the EU-level target. Still, many Member States have endorsed the EU strategic target and incorporated it into their national road safety strategies – at least nine Member States have adopted the EU strategic target directly into their own national frameworks; at least eleven other have adopted similar quantitative strategic targets. This indicates that the majority of Member States consider target setting to be a useful tool.

¹¹³ Jeanne Breen, *Road safety study for the interim evaluation of Policy Orientations on Road Safety 2011-2020*, 12 February 2015, pp. 58, 66, 79

¹¹⁴ See Annex 6, Report from the stakeholder workshop 17 November 2014

¹¹⁵ International Organisation for Standardisation, *Road traffic safety (RTS) management systems – Requirements with guidance for use*, ISO 39001:2012(E); World Health Organisation, *Global status report on road safety 2013*, p.27; Jeanne Breen, *Road safety study for the interim evaluation of Policy Orientations on Road Safety 2011-2020*, 12 February 2015, p.61

¹¹⁶ ECORYS/SWOV, *Impact Assessment Road Safety Action Programme, Assessment for mid-term review, Final Report*, April 2005, p.49

¹¹⁷ Transport & Mobility Leuven, Final Report – Volume 1, Ex-post evaluation of the RSAP, 23 December 2009

Table 8: Strategic road safety targets in national road safety plans submitted to the European Commission

Member State	Strategic target
Austria ¹¹⁸	-50%, 2011-2020
Belgium ¹¹⁹	Maximum 620 deaths per year by 2015 and 420 in 2020
Bulgaria ¹²⁰	-50%, 2011-2020
Croatia ¹²¹	-50%, 2011-2020
Cyprus ¹²²	-50%, 2011-2020
Czech Republic ¹²³	-60%, 2009-2020
Denmark ¹²⁴	No more than 120 deaths in 2020
Estonia ¹²⁵	By 2015, no more than 75 road deaths in one year
Finland ¹²⁶	No more than 100 annual traffic fatalities by 2025
Germany ¹²⁷	-40%, 2011-2020
Greece ¹²⁸	-50%, 2011-2020
Hungary ¹²⁹	-50%, 2011-2020
Ireland ¹³⁰	No more than 124 deaths in 2020
Lithuania ¹³¹	To be among the 10 Member States with fewest road deaths, or no more than 60 road deaths per million inhabitants, 2011-2017
Netherlands ¹³²	In 2020, traffic accidents should cause no more than 500 fatalities and 12,250 injuries
Portugal ¹³³	Reach 62 deaths per million inhabitants in 2015, the equivalent to a 32% decrease compared to 2006
Poland ¹³⁴	-50%, 2011-2020
Slovakia ¹³⁵	-50%, 2011-2020
Spain ¹³⁶	-50%, 2011-2020
Sweden ¹³⁷	-50%, 2007-2020

In the stakeholder consultation workshop, one of the most frequently repeated messages from the participants to the Commission was that the strategic target to reduce road fatalities was considered a success and a useful tool for mobilisation of road safety actions on national and local level.¹³⁸ Also the technical study found that the strategic fatality target is relevant.¹³⁹

Target achievability

The target is to halve road deaths by 2020, compared to the 2010 level. This means that the aim is to have no more than 15,750 road deaths in the EU during 2020.

¹¹⁸ Austria, Austrian Road Safety Programme 2011-2020

¹¹⁹ <http://eurorap.org/partner-countries/belgium/>

¹²⁰ Bulgaria, *National strategy for improving road safety in Bulgaria for the period 2011-2020*

¹²¹ Croatia, *National Road Safety Programme Of The Republic Of Croatia 2011-2020*

¹²² Cyprus, *2012-2020 Strategic Road Safety Plan for Cyprus – Final Report*

¹²³ Czech Republic, *National road safety strategy 2011-2020 and National plan for the implementation of regulations*

¹²⁴ Denmark, *Every accident is one too many – a shared responsibility. Danish Road Safety Commission National Action Plan 2013-2020*

¹²⁵ Estonia, *Estonian National Road Safety Programme 2003-2015*

¹²⁶ http://www.intermin.fi/en/security/public_order_and_security/traffic_safety

¹²⁷ Germany, *Road Safety Programme 2011*

¹²⁸ Greece, *Strategic Plan for the improvement of road safety in Greece, 2011-2020*

¹²⁹ Hungary, *Road safety action programme 2011-2013*

¹³⁰ Ireland, *Road safety strategy 2013-2020*

¹³¹ Lithuania, *National road safety development programme for 2011-2017*

¹³² Netherlands, *Road Safety Strategic Plan 2008-2020*

¹³³ Portugal, *National road safety strategy 2008-2015*

¹³⁴ Poland, *National road safety programme 2013-2020*

¹³⁵ Slovakia, *Road safety enhancement strategy in the Slovak Republic in the years 2011 to 2020*

¹³⁶ Spain, *Road Safety Strategy 2011-2020*

¹³⁷ <http://www.trafikverket.se/en/startpage/Operations/Operations-road/Road-safety/>

¹³⁸ See Annex 6, Report from stakeholder consultations

¹³⁹ Jeanne Breen, *Road safety study for the interim evaluation of Policy Orientations on Road Safety 2011-2020*, 12 February 2015, p.79

The target of halving EU road deaths by 2020 was adopted as an aspirational, strategic target. It was not primarily based on empirical analysis or modelling of road fatality trends and potential impact of interventions but identified as a tool to bring attention to the road safety problem and mobilise the Member States for a common cause. The Policy orientations concludes that to reach the target, actions on both EU and Member State level are required, even if Member States are not bound by the target but only encouraged to support and contribute to it.

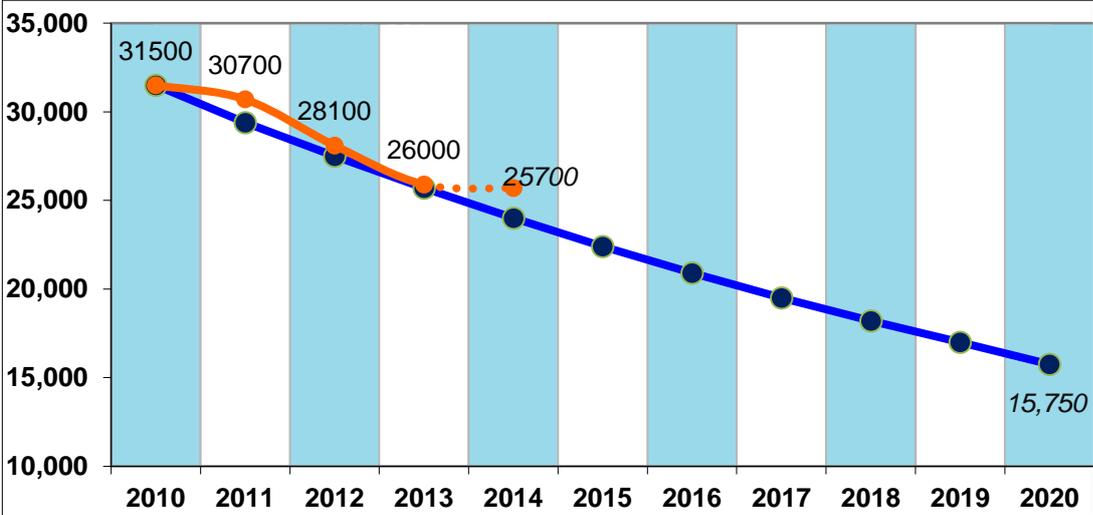
If all Member States were to reach the road fatality rate of the best performing country in 2010 (28 deaths/million inhabitants), the target would be reached with some margin, even taking the expected population increase into account. This is not an easy challenge: in 2010 only 12 countries had reached the level of the best performing country in 2000 and in the period 2000-2010 there was a decrease of only 43%, which is however a significant improvement considering the large number of lives saved.

The annual reduction rate so far has not been quite as high as required for the target to be reached. In order to decrease 50% over a ten years period, an average annual decrease of 6.7% is needed. In the time period from 2010 to 2014, there was an 18.4% decrease or an annual average decrease of 5%.

If the average reduction pace 2010-2014 continues, the target will not be reached.

The six largest Member States¹⁴⁰, together accounting for 65% of all road deaths, decreased their fatalities by 17% from 2010 to 2014, slightly less than the EU average decrease by 18.4%. The best performing Member States seem however to have reached a safety level where further progress is more difficult to achieve without innovative new safety measures.

Figure 3: Development over time



In Figure 4, the red line shows actual fatality numbers whereas the blue line shows the theoretical decrease in order to achieve the target for 2020.

If the average reduction pace for the EU28 remains the same for the rest of the period, the final outcome would only be around 40%. However, the development over these four years has not been uniform. There were two years with lower than required reduction and two years with a higher than required reduction; it is therefore difficult to predict the continued development.

Since the total improvement has not been quite in line with the target, an annual average decrease of 7.8% is now needed from 2015 to 2020.

¹⁴⁰ Germany, France, Italy, Poland, Spain and the United Kingdom

Table 9: Target development and actual development

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Target number	31500	29400	27400	25600	23900	22300	20800	19400	18000	16900	15750
Target decrease		-6.7%	-6.7%	-6.7%	-6.7%	-6.7%	-6.7%	-6.7%	-6.7%	-6.7%	-6.7%
Actual number	31500	30700	28100	26000	25700						
Actual decrease		-3%	-9%	-8%	-1%						
New target number						23700	21800	20100	18600	17100	15750
New target decrease						-7.8%	-7.8%	-7.8%	-7.8%	-7.8%	-7.8%

The trend so far is not necessarily the best indicator for predicting the final results. The actions on Member State level can be expected to have a major impact on the final outcome numbers, since road safety is a shared competence and a large part of all road safety actions are taken on local or national level. The EU legislation can only be effective if it is properly implemented and enforced. It is therefore clear that, in order to reach the target, road safety work will be needed on EU, national and local level over the coming years.

Some of the EU initiatives from the last strategy period and from the beginning of this period are expected to have an effect in the coming years. Examples are the full application of Directive 2011/82/EC on cross-border exchange of information for enforcement addressing dangerous road user behaviours by non-resident drivers and the roadworthiness rules for more thorough and more regular technical inspections of vehicles as from 2018. 70% of the total tube length of all long TEN-T tunnels is still to be refurbished¹⁴¹ in line with Directive 2004/54/EC on tunnel safety, with a deadline in 2019. Actions with long take-up times, such as new type approval rules and raised minimum standards for driver licencing are also expected to start giving results in the coming years.

On the other hand, there are also external factors to take into account, which might need being compensated for by additional road safety efforts.

For example, an increasing total EU population will have an impact on the total number of road deaths. If the total population increases, the total number of road deaths will also increase if road safety risks are not mitigated.

The target is seen as challenging but not impossible to reach: continued and possibly additional efforts will be needed the coming years.

The last decade, the EU experienced an average population growth of 0.28% per year. With a similar growth in the period 2015-2020, the average fatality rate must go down to 31 deaths per million inhabitants in order for the target level of no more than 15,750 road deaths in 2020 to be reached.

Stronger economic development over the next few years could cause a slow-down in the decrease of road deaths in the short-term, according to the research.¹⁴² A higher occurrence of extreme weather situations as a result of climate change could cause difficulties in traffic, possibly leading to higher road risks.¹⁴³ These external aspects will be further discussed more in detail in Chapter 6.4 below.

¹⁴¹ ICF/TRT, *Study on the implementation and effects of Directive 2004/54/EC on minimum safety requirements for road tunnels in the trans-European road network*, 21 February 2015, p.16

¹⁴² International Transport Forum, *IRTAD Research Report, Road safety and economic development*, 2015

¹⁴³ Swov Fact Sheet, *The influence of weather on road safety*, Leidschendam, 2012

The technical study made the assessment that the strategic target is challenging but that it could still be reached, if additional action is taken in the coming years. The study concluded that it is the actions at national level, particularly enforcement of key road safety rules, and on speeding in particular, which can have quick enough results for the 2020 target to be met.¹⁴⁴

The views among the stakeholders consulted in November 2014 differed on the chances of the target being met.¹⁴⁵ Some stakeholders had doubts about the target being realistic.¹⁴⁶ Others had a more optimistic view with the caveat that more efforts were likely needed.¹⁴⁷ Most consulted stakeholders did not voice any opinion on the outlook for the target.

Relevance of actions/operational objectives

The problem analysis in Chapter 3.3 identified a number of current main road safety concerns.

The seven operational objectives of the Policy orientations all address either the overarching problems of fatal and serious crashes or the specific problem areas or main victim groups.

All actions are targeting problems that are still relevant

The actions linked to education and training of road users and the actions for enforcement of traffic rules aim to create safer vehicle drivers, thereby reducing the number of serious crashes affecting all categories of road users. Education and training of road users targets the young and novice drivers in particular.

The actions for safer infrastructure target both motorways (legislation) and other road types (soft measures) where the target victim groups on the motorways are primarily the vehicle occupants and inside urban areas primarily the vulnerable road users.

The actions within the focus area "safer vehicles" target the passive and active safety of vehicles in order to prevent crashes – especially crashes linked to technical failure - and to reduce the severity of crash outcomes. The prevention of crashes benefits all road users whereas, apart from the pedestrian safety legislation¹⁴⁸, the vehicle passive safety measures primarily address the safety of vehicle occupants. The modern technology such as advanced driver assistance systems may benefit all road user categories whereas eCall is directly targeting car occupants.

Actions related to serious road injuries will benefit all road users but to a larger extent the vulnerable road users, the elderly and road users in urban areas.

The actions under the heading "safety of vulnerable road users" address the pedestrians, cyclists and motorcyclists but also in a wider sense also the total number of serious crashes.

The current framework addresses all identified problems except the gender aspect

All main problems identified in 2014 are covered by an objective/action except the gender aspect which is only indirectly addressed through the work to reduce all fatal and serious crashes.

Studies on possible additional actions to address the gender aspect of road safety could therefore be considered. Any additional actions to address the current safety issues and

¹⁴⁴ Jeanne Breen, *Road safety study for the interim evaluation of Policy Orientations on Road Safety 2011-2020*, 12 February 2015, p.78

¹⁴⁵ See Annex 6, Report from the stakeholder workshop 17 November 2014

¹⁴⁶ Comments by e.g. DE, HU, Continental.

¹⁴⁷ Comments by e.g. Federation of European Motorcyclists Association and the European Transport Safety Council

¹⁴⁸ Regulation (EC) No 78/2009 on the type-approval of motor vehicles with regard to the protection of pedestrians and other vulnerable road users, amending Directive 2007/46/EC and repealing Directives 2003/102/EC and 2005/66/EC, 14 January 2009

complement the on-going initiatives would require proper impact assessments before concrete proposals are presented.

The technical study made the assessment that the seven operational objectives of the Policy orientations remain relevant compared to the current main road safety problems but that a greater focus on the motorised road users was needed, given these make up the majority of deaths. The study found that several of the operational objectives overlap and that a review of the structure of the targets could be made with a view of merging objective 4 (safer vehicles) and objective 5 (increased use of modern safety technologies) for clarity and a more holistic, focused approach.¹⁴⁹

The respondents in the stakeholder consultation considered the seven objectives of the Policy orientations to be still relevant.

6.2. Effectiveness

Questions:

- To what extent have the EU initiatives contributed to the decrease in the number of road fatalities (in total and for different road user groups, e.g. pedestrians, car drivers, motorcyclists, young road users, elderly, professional drivers) during the period under analysis?
- What external factors have hindered or helped the achievement of objectives?
- What unintended positive and negative effects, if any, have been produced?

Most road safety actions on EU level have relatively long lead times. The technical study concluded that it's primarily the key actions taken in the previous decade which will contribute to the 2020 target. The study made the assessment that few actions taken since 2011 are likely to have a major impact on the total number of road fatalities yet.¹⁵⁰

This chapter therefore covers two main aspects: first a more general discussion on *impacts* covering also impacts resulting from the road safety actions during the last decade and then the short-term *results and outputs* from the actions taken since 2011.

The overall road safety impact

The main performance indicator for road safety impact is the progress towards reaching the 2020 strategic target of halving the number of road deaths.

As described in Chapter 3.3 above, the total number of EU road deaths decreased by 18.4% from the baseline year 2010 to 2014.

In the discussion below it is shown that the decreasing differences between Member States can be seen as an indicator of EU road safety work being effective. The extent of this effectiveness cannot be measured. To pinpoint the exact extent of EU contribution to the road safety outcomes for specific categories of road user types, road types, age groups or causal factors is also not possible.

- *Comparison over time*

The number of road deaths has decreased since 1991, both in total for the 28 countries presently Members of the Union and in the 15 countries acceding before 2000. The decrease rate is significantly higher after 2001.

¹⁴⁹ Jeanne Breen, *Road safety study for the interim evaluation of Policy Orientations on Road Safety 2011-2020*, 12 February 2015, p.44 and p.67

¹⁵⁰ Jeanne Breen, *Road safety study for the interim evaluation of Policy Orientations on Road Safety 2011-2020*, 12 February 2015, p.78

In the decade 1991-2000, the total number of road deaths decreased by 25% for the EU28 and by 26% for the EU15. In the decade following the adoption of the first EU road safety action plan, the road fatality reduction was 47% for the EU28 and 43% for the EU15. The improvement after 2001 could partly be explained by the effects of the EU's common road safety work and the setting of an ambitious common EU target. It could to some degree also be linked to the increasing traffic and subsequent increase of road deaths during the 1990s, following the opening of borders in central Europe.

Road deaths have decreased more quickly since 2001 when the first EU target was set.

- *Results per Member State*

When looking at the effects in different Member States, the difference in road fatality rates is decreasing over time. In 2014 the average of the highest three fatality rates was down to 3.4 times the average of the three lowest EU fatality rates. This could be seen as an indicator of EU actions having effect.

The differences between Member States are decreasing

EU actions are to some degree aimed more towards the countries with highest road fatality rates, for example by raising minimum standards for vehicle testing, infrastructure safety or driver licence trainings and exams. These EU actions primarily affect the Member States with low road safety levels. The best performing countries already have the higher standards in place.

The decreasing differences are also linked to the fact that the traditionally best performing road safety countries have experienced a slower decrease rate over the last years. These countries have already reached a very low road fatality rate and now find it difficult to progress further. In the meantime, the Member States with high fatality rates are catching up towards the EU average.

- *Development following EU accession*

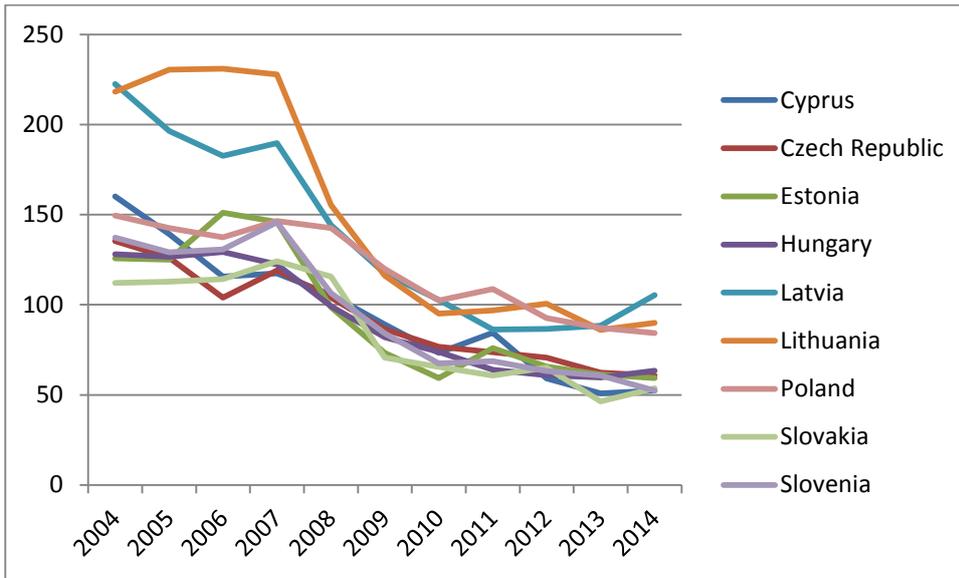
When looking at development over time for different Member States, there seems to be a significant pattern. Except for Malta¹⁵¹, the Member States acceding after 2001 all report a steep reduction in the number of road deaths a few years after the accession. The countries that became Member States in 2004 went from fatality rates of 100-250 deaths per million inhabitants to rates of 50-100 deaths per million inhabitants in only ten years following their accession (see Figure 5).

The Member States joining in 2004 went from fatality rates of 100-250 to rates of 50-100 in only ten years after accession.

In many of these countries, the number of road deaths was still increasing in 2001. Yet, the ten Member States joining the EU in 2004 managed to achieve the same average reduction rate as the old Member States with 55% fewer road deaths for the period 2001-2014.

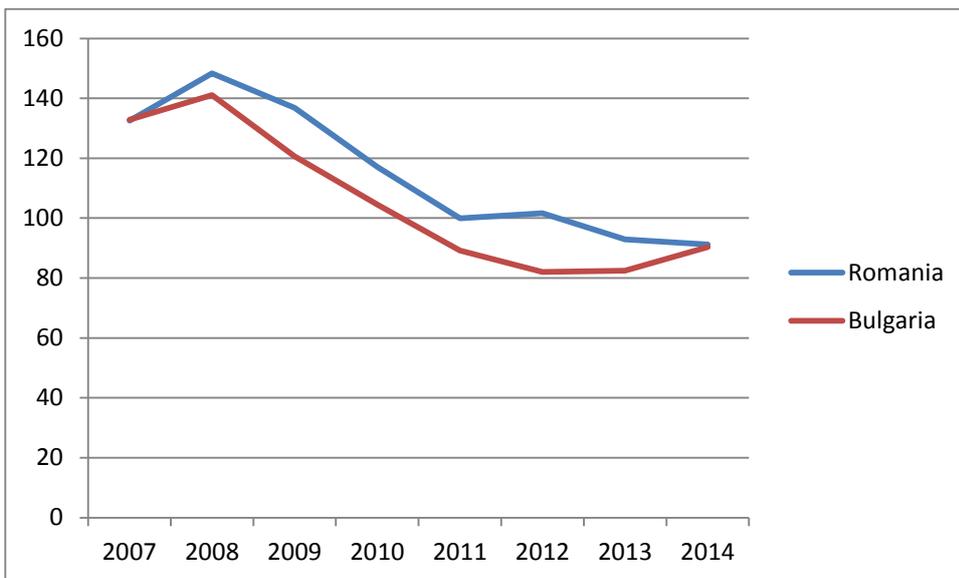
¹⁵¹ Malta is here dealt with separately: they have a small population and few road deaths and therefore have a different pattern of fluctuations over time than the larger Member States.

Figure 4: Member states joining in 2004, development over time



Bulgaria and Romania follow the same pattern: for the longer time frame 2001-2014 they had only a 30% reduction of the number of road deaths as compared to the 55% decrease in the EU15. Since 2010 they have however caught up and for the period 2010-2014 Bulgaria and Romania achieved the same decrease rate as EU average, 18%.

Figure 5: Member States joining in 2007, development over time



Croatia joined the EU in 2013 and subsequently reported one of the best percentage changes among all EU Member States from 2013-2014 with -15% road deaths in one single year.

This could be seen as an indication of EU membership having positive road safety effects. It is a contrary result to the prediction in the mid-term evaluation of the EU road safety framework 2003-2010 that the Member States joining after 2004 would only achieve minimal progress, based on their poor development up to that date.¹⁵²

¹⁵² ECORYS/SWOV, *Impact Assessment Road Safety Action Programme, Assessment for mid-term review, Final Report*, April 2005

The result instead supports the findings by a Spanish research team who published in 2013 an econometric analysis of the effect of EU road safety policy on domestic road mortality rates in the EU-27. They found that countries with high road fatality rates, even if they are geographically, politically, socially and economically distant from the traditionally strong road safety countries, have started to adapt more quickly since their accession to the EU, with a positive influence on domestic road safety.¹⁵³ The explanation according to this research is that the ambitious EU road safety acquis contributes to concrete results in the Member States acceding to the Union.

- *EU results in international comparison*

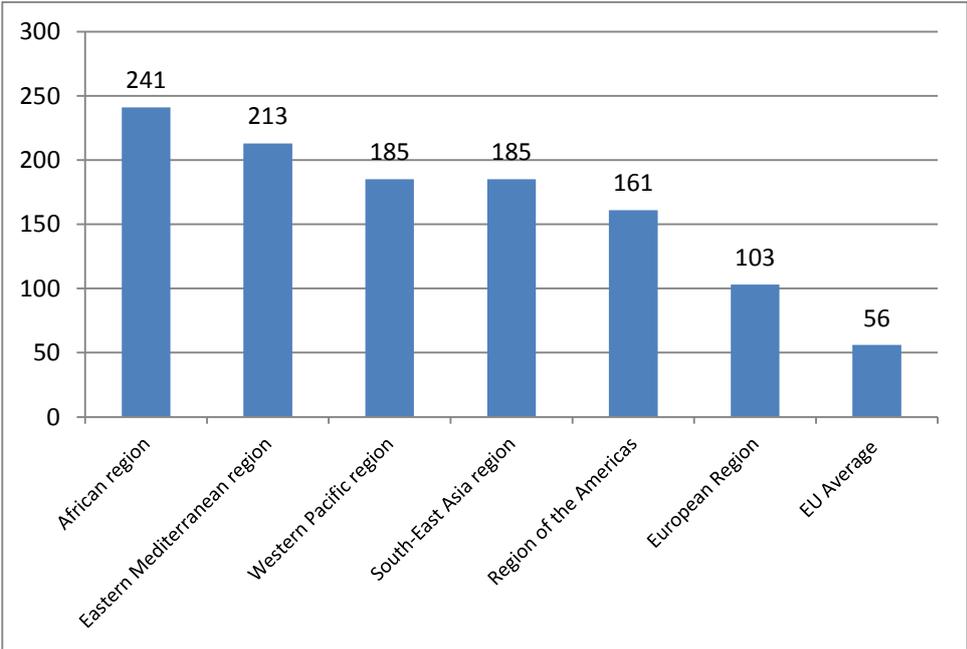
In global comparison, the EU has a unique position when it comes to road safety. The Member States report a continuous decrease of the number of road deaths, contrary to the trend in most low- and middle income regions.

EU is the safest region world-wide.

The total EU fatality rate is also lower than in any other region in the world. In the EU, the fatality rate in 2012¹⁵⁴ was 56 deaths per million inhabitants, compared to 103 deaths per million for the entire European region and 161 deaths per million in the American region. The highest regional fatality rate is found in the African region with 241 deaths per million inhabitants (Figure 7).

The total number of road traffic deaths globally is around 1.24 million per year. Of these, only around 26,000 are in the EU.¹⁵⁵

Figure 6: Road fatality rates in the world regions 2012 (deaths per million inhabitants)¹⁵⁶



Looking at country level, only five non-EU countries reported road fatality rates below the EU average of 56 deaths per million inhabitants in 2012¹⁵⁷: Iceland, Norway, Israel, Japan and Switzerland.

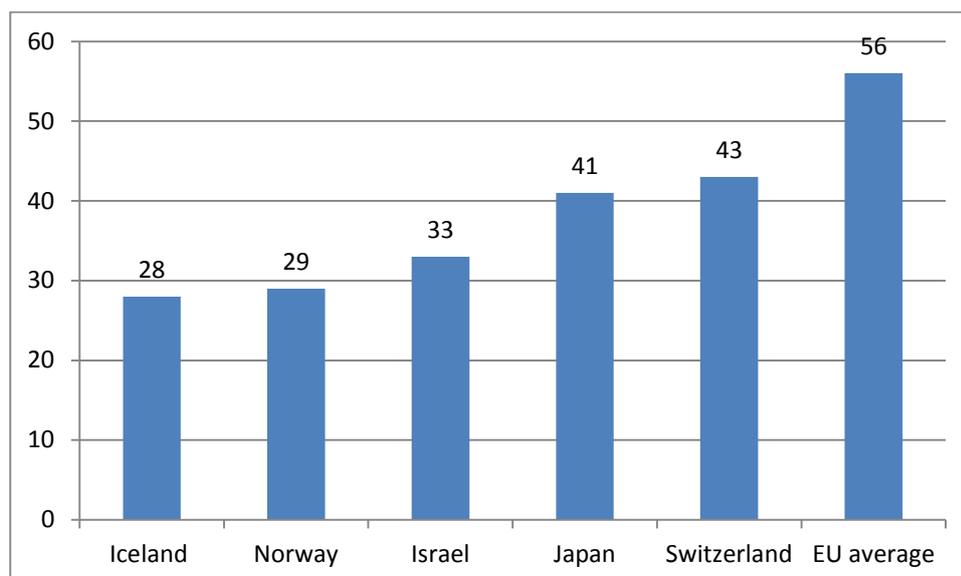
¹⁵³ José I. Castillo-Manzano, Mercedes Castro-Nuño and Xavier Fageda, *Journal of European Public Policy: Could being in the European Union save lives? An econometric analysis of the Common Road Safety Policy for the EU-27*, 2013, pp 14-15

¹⁵⁴ Most recent global figures.

¹⁵⁵ World Health Organisation, *Global status report on road safety 2013*, p.6

¹⁵⁶ World Health Organisation, *Global status report on road safety 2013*, p.6

Figure 7: Lowest road fatality rates outside EU in 2012 (deaths per million inhabitants)¹⁵⁸



Of these five non-EU countries, Norway and Iceland also have lower number of road fatalities per billion vehicle kilometres than the EU average whereas Israel and Switzerland report a level around EU average and Japan a higher level.¹⁵⁹ Norway and Iceland are members of the European Economic Area and as such apply most EU legislation in the road transport area.

- *Road user types*

The EU initiatives constitute a mix of activities covering road user behaviours, infrastructure aspects and the safety of vehicles. The aim is to improve safety for all road user categories, inside and outside of vehicles.

Yet, the results over time differ between the road user groups. The total change 2010-2013 is -22% car occupant fatalities and -17% motorcyclist fatalities but only -11% pedestrian fatalities and -3% cyclist fatalities.

The low performance recorded in the last two groups could be attributed to the increased number of cyclists¹⁶⁰ and pedestrians following the general trend of shift to sustainable transport modes and/or an increased use of distracting devices such as smartphones among pedestrians. The difference in development could however also indicate that road safety actions with an impact after 2010 have been more successful on safety measures for car occupants and motorcycle riders than for the vulnerable road users.

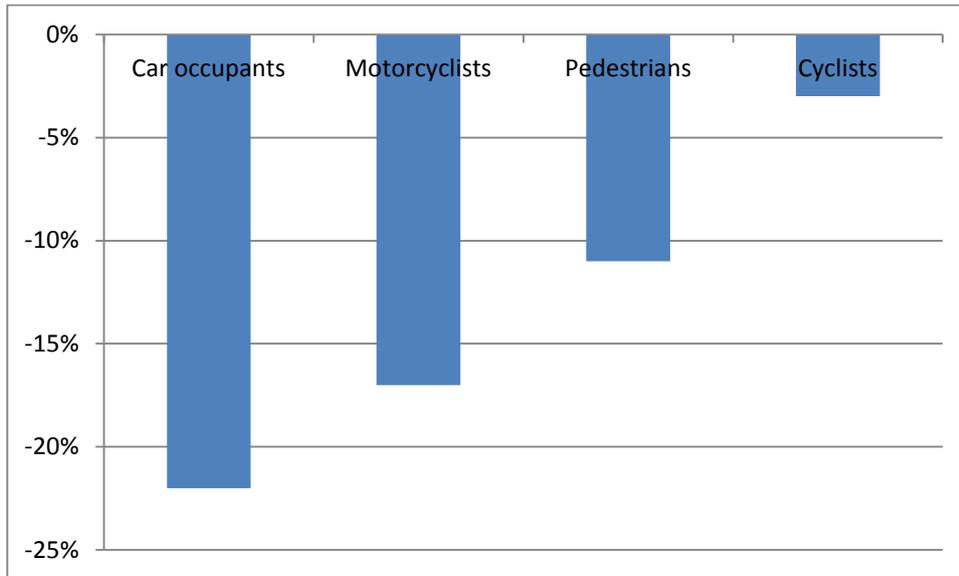
¹⁵⁷ International Transport Forum, *IRTAD Road Safety Annual Report 2014*, OECD/ITF 2014, p.22-23; 2012 figures are the most recent available for all OECD countries at this date.

¹⁵⁸ International Transport Forum, *IRTAD Road Safety Annual Report 2014*, OECD/ITF 2014, p.22-23

¹⁵⁹ International Transport Forum, *IRTAD Road Safety Annual Report 2014*, OECD/ITF 2014, p.24

¹⁶⁰ Based on the very limited data available from Member States, ECF finds that cycling at national level has seen a moderate increase over the past few years with high increase in several big cities: European Cyclists' Federation, *National cycling mode share/ km cycled*, 3 March 2015

Figure 8: Fatality percentage change 2010-2013 for different road user groups



This could in turn be interpreted as an indication of higher effectiveness of measures to reduce severity of a crash for vehicle occupants/riders (e.g. seat belts, air bags, motorcycle helmets and protective clothing) as compared to measures aiming to prevent crashes.

It could also be considered an indication of higher effectiveness of measures to reduce the number of crashes on inter-urban roads and motorways (with more EU-level contribution) as compared to urban areas, where the majority of pedestrians and cyclists are.

Different trends for different road user and road types do not give conclusive indication on the extent of effectiveness of EU actions.

Finally, the EU actions specifically targeting pedestrians and cyclists under the Policy orientations is not expected to have provided any additional impact yet (see Table 10).

The finding is in line with the technical study conclusion that the focus should be more on preventing fatal outcomes rather than preventing crashes in general and that vehicle design measures have been one of the most effective EU actions.¹⁶¹

- *Road types*

The number of road deaths on urban roads decreased by 18% and the fatalities on inter-urban roads went down by 19%. The improvement on the motorways is smaller with only a 4% reduction from 2010 to 2013.

The different evolution of urban and motorway road deaths could be interpreted as an indication that road safety is in this case not an effect of EU actions, considering that there is more extensive EU legislation on motorway safety than on urban area road safety, the latter primarily falling under Member State's competence and responsibility.

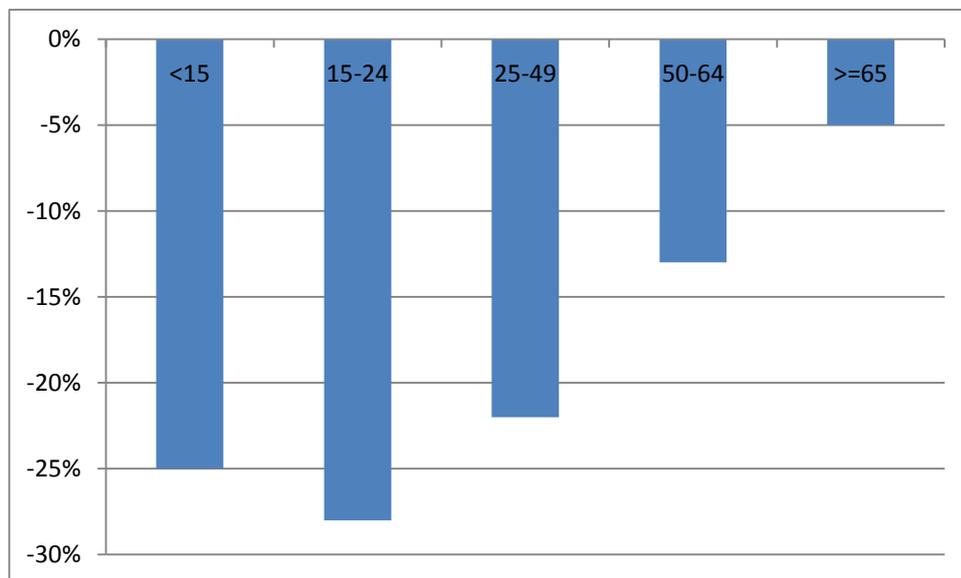
More likely is however that the motorways have already reached a very safe level – only 7% of all fatalities – as an effect of the specific road design characteristics of these roads and possibly also of the EU safety management legislation. The scope for further improvement on motorways is therefore more limited than for urban areas and inter-urban roads which can be made substantially safer.

¹⁶¹ Jeanne Breen, *Road safety study for the interim evaluation of Policy Orientations on Road Safety 2011-2020*, 12 February 2015, p 46

- *Age groups*

The average improvement for the different age groups differs substantially. The best improvement during this time period is for the young road users, 24 years and younger. The fatalities in the age group 25-49 years old decreased just above EU average between 2010 and 2013. The fatalities among those aged 50 or more however saw only a moderate improvement.

Figure 9: Fatality percentage change 2010-2013 per age group



This is partly explained by the increase in the total number of elderly in EU over these years. Whereas the total EU population increased by 0.39% between 2010 and 2013, the number of people aged 65 or more increased by 4.4%. The number of people aged 24 years or less decreased by 1.8% in the same time.

Taking the population change into account, the road crash risk for the elderly has therefore decreased: the fatality rate was higher in 2010 (77 deaths per million elderly) than in 2013 (71 deaths per million elderly). However, the fatality decrease for those aged 15-24 decreased much more, from 102 deaths per million in 2010 to 76 deaths per million young people in 2013.

EU interventions the last decade have been targeted more towards the young and novice drivers. For example, Directive 2006/126/EC on driving licences¹⁶² addresses the training and testing of younger drivers and regulates young peoples' access to the heaviest motorcycles.

Different trends for different age groups are a possible effect of EU actions targeted at young drivers.

There are no EU interventions as directly aimed at the safety of the elderly road users. Elderly are also more present in urban traffic, which is primarily dealt with on local and national level. A study on road safety for elderly is presently on-going with expected results in late 2015.

- *Gender*

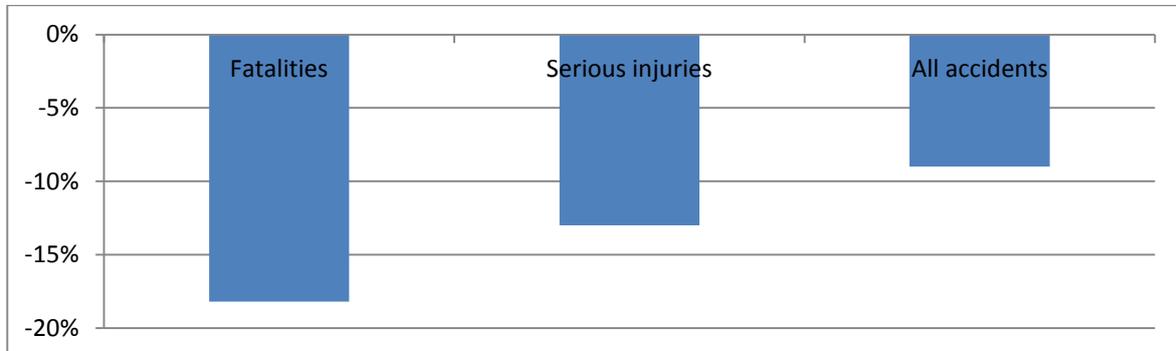
There is no reduction of the gender gap over time. There have also been no EU-level actions addressing the gender-related road safety patterns.

¹⁶² Directive 2006/126/EC of the European Parliament and of the Council of 20 December 2006 on driving licences

- *Serious injuries*

The question of prevention of crashes versus severity of crash outcomes can be checked by comparing the evolution of the total number of road crashes with the evolution of the more serious crash outcomes.

Figure 10: Evolution of different types of road crash outcomes 2010-2013



Over time, the number of road fatalities has decreased twice as fast as the total number of reported crashes: 17.5% compared to 9% decrease between 2010 and 2013.

The number of road fatalities also decreased more than the number of serious road injuries (decreasing by 13%) as shown in Figure 11. This indicates that road safety actions until today have been more effective in addressing road fatalities than serious road traffic injuries and that the actions for preventing road deaths are not necessarily effective also on the serious injury problem.

The actions for preventing road deaths seem not to have been effective in preventing also serious road injuries.

A study to explore in further detail the factors contributing to serious injury crashes is planned to be launched in 2015.

- *Causal factors*

Among the causal factors discussed in Chapter 3.3, the speeding on motorways and the seat belt use rates were assessed to have improved whereas the speeding in urban areas and the drink-driving rates showed no clear improvement.

The EU has taken action on enforcement by the adoption of Directive 2011/82/EC on cross-border exchange of information for enforcement. This Directive addresses speeding, drink driving and failure to wear a seatbelt together with a number of other dangerous traffic offences. Directive 2011/82/EC can be expected to start having impact within the next few years but does not explain the different trends for these causal factors in the evaluated time period.

Speeding on motorways is addressed by EU action by the legal requirement of speed limitation devices in buses and trucks¹⁶³. These speed limitation devices only have effect on high-speed roads and have no impact on road safety inside urban areas.

The use of seat belts is addressed on EU level in the form of Directive 91/671/EEC¹⁶⁴ and the following amendments of this Directive. Since 2006, wearing seatbelts is compulsory in all vehicles throughout the EU.

EU actions may partly explain the different developments for different dangerous road user behaviours.

¹⁶³ Council Directive 92/6/EEC on the installation and use of speed limitation devices for certain categories of motor vehicles in the Community, 2 March 1992; applicable on all trucks and buses since 2007

¹⁶⁴ Council Directive 91/671/EEC relating to the compulsory use of safety belts and child-restraint systems in vehicles, 31 December 1991

The Commission has recently performed studies on the effects of alcohol interlocks for road safety. There are EU-level strategies aimed specifically at alcohol use¹⁶⁵ and drug use¹⁶⁶.

These examples of EU actions could be possible parts of the explanation to the difference in outcomes for these causal factors.

The technical study made the assessment that EU actions are likely to have had an impact on reduction of the number of deaths and serious injuries and in particular the measures addressing vehicle safety and vehicle safety design.¹⁶⁷

All consulted stakeholders replied that EU actions have had positive road safety effects, noting however that the EU road safety initiatives were not the only explanatory factor to the reduced number of road deaths and that all EU actions were not necessarily seen as equally effective.¹⁶⁸

EU-level outputs under the Policy Orientations

The EU work since 2011 was already outlined in Chapter 5 above. They are summarised here in an overview of identifiable results and achievements to date.

Table 10: Summary of EU outputs and achievements 2011-2014

EU inputs/outputs by February 2015	Achievements by 2015
Directive 2006/126/EC on driving licences entered fully into force on 19 January 2013.	Raised minimum standards for driver training and testing: minimum standards for driving examiners in all Member States as from on 19 January 2013. Progressive access of young people to the heaviest motorcycles in all Member States as from 19 January 2013.
Obligatory testing on the competence to drive in a safe, economically and environmentally friendly way for truck and bus drivers.	Raised minimum standards for driver training and testing: more thorough testing of heavy vehicle drivers as from 1 January 2014 ¹⁶⁹ .
Periodic training for the Certificate of Professional Competence started in most Member States	Raised minimum standards for training of professional drivers
Directive 2015/413 on cross-border information exchange for the enforcement of road safety related traffic offences adopted.	Non-resident drivers can be penalised for dangerous road traffic offences as from 6 May 2015 in all Member States except Denmark, Ireland and the UK where the Directive is to be transposed at the latest by 6 May 2017.
Evaluation studies on speed limiters ¹⁷⁰ and alcohol interlocks ¹⁷¹ completed in 2013.	Studies completed and used as input into on-going review of the General Safety Regulation 661/2009.
Enforcement planning discussed in road safety plan guidelines document 2013.	No concrete result identified yet.
The infrastructure directive principles already apply mandatorily on TEN-T roads. No formal conditionality but strong encouragement of	EU-funded TEN-T road projects are managed in line with the infrastructure safety principles. At least one road infrastructure safety management

¹⁶⁵ Communication from the Commission, *An EU strategy to support Member States in reducing alcohol related harm*, COM/2006/0625 final, Brussels, 24 October 2006; *Action Plan on Youth Drinking and on Heavy Episodic Drinking (Binge Drinking) (2014-2016) Endorsed by the Committee on National Alcohol Policy and Action (CNAPA)*, 16 September 2014

¹⁶⁶ Council Recommendation, *EU Drugs Strategy 2013-20*, (2012/C 402/01), Brussels, 29 December 2012; Council Notice, *EU Action plan on drugs 2013-2016*, (2013/C 351/01), Brussels, 30 November 2013

¹⁶⁷ Jeanne Breen, *Road safety study for the interim evaluation of Policy Orientations on Road Safety 2011-2020*, 12 February 2015, p.46

¹⁶⁸ See Annex 6: Summary of stakeholder consultations workshop.

¹⁶⁹ Directive 2012/36/EU of 19 November 2012 amending Directive 2006/126/EC on driving licences

¹⁷⁰ Transport and Mobility Leuven, *Ex-post evaluation of Directive 92/6/EEC on the installation and use of speed limitation devices for certain categories of motor vehicles in the Community, as amended by Directive 2002/85/EC*, 9 August 2013

¹⁷¹ Ecorys/COWI, *Study on the prevention of drink-driving by the use of alcohol interlock devices*, 18 February 2014

EU inputs/outputs by February 2015	Achievements by 2015
applying the principles beyond the TEN-T roads.	procedure is also applied beyond the TEN-T road network in at least two thirds of the Member States. ¹⁷²
Active promotion of the infrastructure safety management principles. Principle proposed as "best practice" in guidelines document published 2013.	At least one road infrastructure safety management procedure is applied beyond the TEN-T road network in at least two thirds of the Member States.
Regulation (EU) 168/2013 on type approval for two-and three-wheeled vehicles has been revised.	More safety measures such as ABS in all new motorcycles as from 1 January 2016.
Updated Directive on periodic roadworthiness testing, roadside checks on commercial vehicles on registration documents for vehicles adopted on 3 April 2014.	More thorough and efficient checking of vehicles in all Member States as from 20 May 2018. (five of the Member States ¹⁷³ already had the highest standards of roadworthiness testing before the adoption of the roadworthiness package) ¹⁷⁴
Staff working document on the assessment of benefits of cooperative systems was adopted on 3 October 2014 ¹⁷⁵ . A study on the benefits for road safety of Event Data Recorders was completed in 2014.	Information contributed as input into on-going review of the General Safety Regulation 661/2009.
Regulation (EU) 407/2011 on vehicle electric safety has been adopted.	Harmonised rules on vehicle electric safety apply in all Member States as from 4 December 2012
The implementing measures of the General Safety Regulation ¹⁷⁶ have been adopted.	All new cars equipped with Electronic Stability Control and Tyre Pressure Monitoring System since 1 November 2011. All new heavy goods and passenger vehicles equipped with Lane Departure Warning and Advanced Emergency Braking since 1 November 2011
Decision No 585/2014/EU on the deployment of the interoperable EU-wide eCall service was adopted in May 2014. Proposal on mandatory fitting of eCall devices in passenger cars and light goods vehicles being discussed.	Public infrastructure for eCall to be ready no later than 1 October 2017.
Common EU definition defined, methodology for data reporting agreed and first new data to be reported during first half of 2015	New data arrival enables cost-benefit analysis on serious road injuries for possible future measures to reduce severity of crash outcomes.
Analysis of emergency brake systems/pedestrian detection in the Staff working document adopted on 3 October 2014 ¹⁷⁷ .	Information contributed for the on-going review of the General Safety Regulation 661/2009.
Updated Directive on periodic roadworthiness testing adopted on 3 April 2014, provides for technical inspections of motorcycles or measures to the same effect.	Motorcycles to undergo periodic technical inspections in all ¹⁷⁸ Member States as from 20 May 2018.

¹⁷² Transport and Mobility Leuven, *Study on the effectiveness and on the improvement of the EU legislative framework on road infrastructure safety management (Directive 2008/96/EC)*, 5 December 2014, p.26 and p.49

¹⁷³ DE, SE, BE, LUX, FI

¹⁷⁴ Commission Staff Working Document: *Impact assessment on the Roadworthiness package*, SWD(2012)206 final 2, Brussels, 13 July 2012

¹⁷⁵ Commission Staff Working Document *on the implementation of objectives 4 and 5 of the European Commission's policy orientations on road safety 2011-2020 – deployment of vehicle technologies to improve road safety*, SWD(2014) 297, Brussels, 3 October 2014

¹⁷⁶ Regulation (EC) No 661/2009 of the European Parliament and of the Council of 13 July 2009 concerning type-approval requirements for the general safety of motor vehicles, their trailers and systems, components and separate technical units intended therefor

¹⁷⁷ Commission Staff Working Document on the implementation of objectives 4 and 5 of the European Commission's policy orientations on road safety 2011-2020 – deployment of vehicle technologies to improve road safety, SWD(2014) 297, Brussels, 3 October 2014

¹⁷⁸ Member States can decide not to implement this rule only if they undertake other actions rendering similar results for safety of motorcyclists

EU inputs/outputs by February 2015	Achievements by 2015
EU recommendations on road safety in sustainable urban mobility planning ("Urban mobility package") adopted on 17 December 2013.	No concrete result identified yet.
Regular publication of updated road safety facts and figures on the Commission road safety website.	Safety information is accessible to road users: The European Commission website has more than 2 million page views per year.
Setting up of the Going Abroad website with information about road safety related traffic rules.	Safety information is accessible to road users: more than 225 000 page views of the Commission Going Abroad website during 2014.
Launch of the Going Abroad information app in June 2014.	Safety information is accessible to road users: more than 73 000 downloads of the Going Abroad app by February 2015.
Running the web-platform "European Road Safety Charter"	Safety information is accessible to road users: The "European Road Safety Charter" has around 42,000 visits per year. The Charter has 2973 members of which 1557 new members joining between 2010 and 2015.

What external factors have hindered or helped?

Road safety in Europe depends on both EU actions and Member States' actions. The bulk of the everyday work on EU Member State level and the actions on local and national level have a large impact on the total road safety results. The EU legislation can only have effect if it is properly implemented and enforced by Member States. At the time of this evaluation, in total 34 infringement procedures were on-going against Member States because of non-transposition of EU road safety directives, notably regarding the rules on driving licences and cross-border enforcement. 13 of these infringement procedures were scheduled for closure by end of June. The detailed level of implementation and the extent of road users' respect for the rules could however not be measured in this evaluation.

In addition to the road safety actions by the Commission, the Member States and other road safety partners, other external factors could also possibly have an impact on the number of road deaths. Three main such factors were identified by the technical study¹⁷⁹ and will be discussed in further detail below. Other potential minor contributing factors will not be covered in this analysis.

- *The financial crisis*

It is broadly recognised that economic growth affects mobility patterns and therefore the traffic flows as well as young drivers' possibility to access motor vehicles. This can in turn have an impact on the total road safety situation.

The traffic flows, measured in estimated vehicle kilometres, have decreased somewhat since 2010. Eurostat reports a 3% decrease of the annual road freight transport. The reported differences between Member States are however huge, ranging from 40% increase in Lithuania and Romania to 30% decrease in Greece and Cyprus.¹⁸⁰

When breaking down the data on road freight in vehicle kilometres on national level, no clear correlation pattern could be found. In three out of ten sample cases the traffic flow and the road fatality trend coincides for the years 2010-2013. In the other seven cases, the development of road fatalities follows the traffic flow developments for some of the measured years but not for others (see Annex 3).

¹⁷⁹ Jeanne Breen, *Road safety study for the interim evaluation of Policy Orientations on Road Safety 2011-2020*, 12 February 2015, pp 21-23

¹⁸⁰ Eurostat: *Annual road freight transport by type of operation and type of transport (1 000 t, Mio Tkm, Mio Veh-km)*, query on 27 January 2015

The technical study found that declines in road deaths between 2007 and 2010 (particularly for those younger than 24 years) for the EU total coincided with a marked decline in GDP growth.¹⁸¹ The EU total GDP decreased by 0.8% in this time period whereas the road fatalities fell by 26%, a higher than average reduction rate. This is in line with a large recent study which found that short-term negative GDP development can accelerate road safety improvement¹⁸². More details on this theoretical correlation can be found in Chapter 6.4 below.

However, when comparing the GDP and road safety development patterns 2010-2014 in a number of Member State cases, no such clear pattern could be found. The national GDP development was cross-run against national road safety figures in twenty sample cases¹⁸³ (see Annex 2). Some Member States, for example Denmark and Lithuania, had a growth in GDP and a decline in road death, whereas others such as Greece and Spain had a decline in both GDP and road deaths. Road fatalities decrease both in the Member States where GDP was mostly decreasing and in the Member States with GDP increase.

Data for 2010-2014 does not provide clear evidence for road safety effects being explained by economic developments.

No conclusion can therefore be drawn on the extent to which the financial situation influenced the road safety outcomes negatively or positively since 2010.

- *Ageing population*

A demographic change with the elderly age group slowly becoming a larger share of the total population at the same time as the young share of the population stagnates could have both positive and negative effects.

Risk taking behaviours are most common within the group of young road users, who are also the most over-represented age group among road fatalities. When the young people's share of the total population goes down, the total number of road deaths caused by risk-taking behaviours could be assumed to decrease.

The change in shares of age groups is likely to small to explain the road death reduction 2010-2013.

The group of people aged 65 years or more is less likely to risk-taking behaviour on the roads. They may experience new difficulties such as slower reactions or reduced eyesight with time; on the other hand they have long experience as drivers. The main effect of the ageing society is likely linked to the elderly road users' fragility as victims in road traffic crashes. The elderly body is more likely to sustain serious or fatal injuries in the event of a crash.¹⁸⁴ The ageing society could therefore also cause an increase in road fatalities because of an increased average vulnerability of the population.

The number of young people in the EU decreased by 1.8% from 2010 to 2013, likely a too small change to be expected to have major impact on the road safety results these years. The number of elderly however increased by 4.4% over the same time and could possibly be assumed to have a small effect on the road safety outcomes although additional analysis would be needed to determine to what extent and in which direction.

¹⁸¹ Jeanne Breen, *Road safety study for the interim evaluation of Policy Orientations on Road Safety 2011-2020*, 12 February 2015, p.21

¹⁸² International Transport Forum, *IRTAD Research Report, Road safety and economic development*, 2015

¹⁸³ The Member States with the five highest and the five lowest fatality rates in 2014 and the Member States with the five highest and the five lowest percentage change in road fatalities from 2010 to 2014. The 2014 GDP was not available for Estonia, Greece, Ireland, Lithuania and Sweden at the time of the evaluation; only figures for 2010-2013 used in these cases.

¹⁸⁴ DaCoTA, *Older Drivers*, Deliverable 4.8k of the EC FP7 project DaCoTA, 2012, p.22

- *Climate change*

The weather has a documented influence on road safety, and can affect both crash rate and the exposure to traffic hazards. Weather conditions can have both positive and negative effects on road safety. The weather related problems differ widely between countries depending on for example climate zones and topography. For example, in countries where winters are usually snowy, vehicles and drivers are more often equipped to cope with snow on the roads. The climate change is expected to cause more frequent extreme weather.

A literature review was made on previously studied correlations between weather conditions and road safety effects. Many weather conditions may have an influence: fog, snow and black ice, low sun, hard wind and high temperatures all have different kinds of effects on road traffic. For example, in warm weather, the number of crashes and the injury severity in reported crashes increases. The most credible reason is that the type of weather influences the choice of transport modes. More motorcyclists, cyclists and pedestrians are present in traffic when the weather is good.¹⁸⁵

Most of the studies on weather and road safety focus on rainfall. The literature indicates that there is a correlation between rainfall and an increased amount of crashes. The risk of a road crash is assessed to be twice as high in rain than on dry roads, linked to decreased visibility and slippery road surface.

Data for 2010-2014 does not provide clear evidence for road safety effects being explained by extreme weather conditions

For the period 2010-2014, it has not been possible to make a detailed analysis of the potential impact of weather conditions. The weather data is only significant on local level and for narrowly defined time periods. Therefore, instead of a large scale analysis, a specific case study was made. Two sample cases of extreme rainfall were identified in the European Climate Assessment Dataset¹⁸⁶: Poland in July 2011 and Austria in July 2012. The road fatality number in these two cases was compared with the road fatalities in July in other years to see whether the extreme rainfall had caused any big change in fatal road crashes (see Annex 4).

No clear result could be found: the rainy July months in Austria and Poland have neither the highest nor the lowest fatality numbers. Instead, the road fatality levels in July for different years coincide more clearly with the road fatality levels for the complete years in these two countries.

No conclusion can therefore be drawn on the extent to which the weather conditions influenced the road safety outcomes negatively or positively since 2010. In future evaluations of a longer time span this issue might be studied further by analysing more detailed local data disaggregated per road user group.

Unintended positive or negative effects

Most respondents in the stakeholder consultation did not identify any unintended effects.¹⁸⁷

A positive side-effect mentioned by several stakeholders was the synergies and added value thanks to the interaction between Member States.¹⁸⁸ The interaction and best-practice exchange within the UN was also considered to lead to an overall more uniform approach to road safety matters and an increased interest in road safety discussions among national stakeholders. An example is the Safe System approach and target-setting, which are not mandatory but are anyway being picked up by an increasing

¹⁸⁵ Swov Fact Sheet, *The influence of weather on road safety*, Leidschendam, 2012 p.1

¹⁸⁶ Royal Netherlands Meteorological Institute (KNMI), *European Climate Assessment Dataset: Days with heavy precipitation: 10mm or more*, <http://eca.knmi.nl/>; Query on 11 March 2015

¹⁸⁷ See Annex 6: Report from the stakeholder workshop 17 November 2014

¹⁸⁸ Comment by e.g DE, HU, the European Conference of Transport Research Institutes

number of Member States. These perceptions seem to be in line with the finding that road safety differences between Member States are decreasing.

One stakeholder mentioned that a negative side-effect of EU road safety policy was a sense of "legislation fatigue" among Member States.¹⁸⁹ The perception was that Member States are being less receptive to new and important legislative proposals for road safety now because they consider that the number of proposals during the last couple of years was already quite large.

The European Federation of Motorcycle Associations considers that the current system for regarding motorcyclist training and motorcycle driving licences creates unwanted barriers to motorcycling, unnecessarily discouraging people from getting a motorcycle licence. The European Federation of Motorcycle Associations also disagrees with the EU policy of gradual access to the heavier bikes, which they consider have no safety benefit.¹⁹⁰ However, the risk of serious road crashes is particularly high for novice riders younger than 24 years on heavy motorcycles.

These potential draw-backs could be further studied in future evaluations of Directive 2006/126 on driving licences and in the ex-post evaluation of the Policy orientations.

In theory, other potential indirect effects could be expected on economy, environment and the public health sector. These have not been possible to be measured: it is too early to expect this kind of unintended effect from the EU actions 2010-2014. The possible links are only discussed here in general terms, providing a basis for future evaluations.

Since a large part of those who die on the roads are young people, road traffic crashes result in a notable loss of human capital. Improved road safety reduces the loss of work force and releases valuable resources especially in the health sector. The cost of road traffic crashes in terms of healthcare, rehabilitation, social security and material damages are substantial; every avoided serious crash could be considered a public saving. This is further discussed also in Chapter 6.3 below.

Road safety actions on e.g. vehicle safety design and requirements for safety equipment can also have economic effects on households if cars become more expensive or new safety regulations require purchases of new safety equipment for the car, the bike or the motorcycle. More strict training requirements can increase the cost of obtaining a driving licence. Increased requirements for periodic roadworthiness testing of cars and motorcycles create an added cost for both households and companies.

Increased demands on safety equipment for trucks and on more training for heavy vehicle drivers also creates operation and investment costs for companies in the road transport sector. At the same time, reduced congestion caused by accidents and reduced risk of road crashes increase the efficiency of the road transport sector. Better safety can also lead to lower insurance costs. The focus on developing safer vehicles and new cooperative information systems stimulates innovation by vehicle manufacturers and transport management system developers, which in turn supports economic growth.

There could also be environmental side effects of general road safety improvements. Lower speed following improved traffic rule enforcement and better design of infrastructure leads to more optimal fuel consumption and lower emissions. Fewer road traffic crashes contributes to less road congestion¹⁹¹ with positive impact on emissions, fuel consumption and noise pollution. More on this is discussed in Chapter 6.4 below.

¹⁸⁹ Comment by the European Conference of Transport Research Institutes

¹⁹⁰ Annex 6, Report from the stakeholder workshop 17 November 2014

¹⁹¹ For example: ECORYS/SWOV, *Impact Assessment Road Safety Action Programme, Assessment for mid-term review, Final Report*, April 2005, p.61

6.3. Efficiency

Questions:

- Were the (expected) effects obtained at a reasonable cost?
- Could the same results have been achieved at a lower cost by other initiatives?

This chapter has three parts. First the overall savings from improved road safety in the wider sense are assessed (all road deaths and serious road traffic injuries in the EU). Then the overall costs for this improved road safety are estimated (road safety expenditure in the EU and the Member States). Finally, there is a presentation of specific costs for implementing the Policy orientation actions under the Commission budget line dedicated to this particular policy framework.

Target/impact – overall savings

To put a monetary value on a lost life is ethically questionable. Still, for statistical purposes it can be necessary to make an estimate on average costs of road fatalities and serious road injuries.

The basis for estimating the average costs in this evaluation is the assessed *value of statistical life*. The EU average value of statistical life is estimated to be €1.7 million in the latest *Update of the Handbook on External Costs of Transport*.¹⁹² The value of statistical life corresponds to the expected costs for the road crash victim and the relatives and friends of that person. To this is added the external costs of a fatal crash (output loss, material costs, police and medical costs, etc.). These are assessed to be on average 10% of the value of statistical life.

Based on this model, the cost of one fatality is estimated to an average €1.87 million per road fatality.

The estimated average statistical monetary value of a serious road traffic injury is set at 13% of the fatality cost.

These statistical costs of fatalities and serious injuries have then been refined by calculating the different purchasing power and public cost levels in different EU Member States to identify country-specific statistical cost assessments (Table 11).

¹⁹² Ricardo-AEA, *Update of the Handbook on External Costs of Transport, Report for the European Commission DG MOVE*, 8 January 2014

Table 11: Average social costs at market prices (PPP) in euro, 2010¹⁹³

Country	Fatality	Severe injury	Slight injury
Austria	2,395,000	327,000	25,800
Belgium	2,178,000	330,400	21,300
Bulgaria	984,000	127,900	9,800
Croatia	1,333,000	173,300	13,300
Cyprus	1,234,000	163,100	11,900
Czech Republic	1,446,000	194,300	14,100
Denmark	2,364,000	292,600	22,900
Estonia	1,163,000	155,800	11,200
Finland	2,213,000	294,300	22,000
France	2,070,000	289,200	21,600
Germany	2,220,000	307,100	24,800
Greece	1,518,000	198,400	15,100
Hungary	1,225,000	164,400	11,900
Ireland	2,412,000	305,600	23,300
Italy	1,916,000	246,200	18,800
Latvia	1,034,000	140,000	10,000
Lithuania	1,061,000	144,900	10,500
Luxembourg	3,323,000	517,700	31,200
Malta	2,122,000	269,500	20,100
Netherlands	2,388,000	316,400	25,500
Poland	1,168,000	156,700	11,300
Portugal	1,505,000	201,100	13,800
Romania	1,048,000	136,200	10,400
Slovakia	1,593,000	219,700	15,700
Slovenia	1,989,000	258,300	18,900
Spain	1,913,000	237,800	17,900
Sweden	2,240,000	328,700	23,500
Great Britain	2,170,000	280,300	22,200
EU average	1,870,000	243,100	18,700

Using this calculation method, cost savings can be analysed from 2010-2013. The cost of all fatal road traffic crashes in 2010 amounted to €55 billion. That is the amount the EU spends in one year on the entire budget heading *Sustainable growth: natural resources* (environment, agriculture and fishing).¹⁹⁴

In 2014, the cost of all fatal road traffic crashes amounts to €46 billion, a 17% decrease compared to the baseline year. The number of fatalities decreases slightly more than the estimated costs over this time period since the decrease of fatalities has been uneven among Member States.

The cost of all reported serious road traffic injuries in 2010 amounted to €61 billion and to €54 billion in 2014. This is an 11% decrease of the costs.

For the total number of fatal and serious road injuries, the yearly statistical costs are therefore €17.5 billion lower today than four years ago.

Table 12 shows the estimated statistical costs per year and the cost reduction over time. However, it should be noted that for a

The annual statistical costs for fatalities and serious road injuries are €17.5 billion lower today than four years ago.

¹⁹³ Ricardo-AEA, *Update of the Handbook on External Costs of Transport, Report for the European Commission DG MOVE*, 8 January 2014

¹⁹⁴ *General Budget of the European Union for the Financial Year 2014*, Official Journal of the European Union, volume 57, 20 February 2014, p10

proper cost-benefit analysis, the annual costs should not only be compared to previous years but to a scenario without any road safety actions at all. A useful and accurate estimate of such a counter-factual scenario was not possible to make in this evaluation.

Table 12 Statistical costs of road deaths and serious injuries 2010-2014 (billion €)

Year	Costs for fatalities and seriously injured	Reduction from previous year	Reduction from 2010
2010	€116, 5 billion	-	-
2011	€116 billion	€0,5 billion	€0,5 billion
2012	€107, 6 billion	€8,4 billion	€8,9 billion
2013	€99,6 billion	€8 billion	€16,9 billion
2014	€99 billion	€0,6 billion	€17,5 billion

Finally, the technical study concluded that the "benefit-to-cost assessment may not always be the best tool to determine priorities for resource allocation and harmonisation. Measures which prevent the largest number of road deaths and serious injuries may have a lower benefit-to-cost ratio than measures with higher benefit-to-cost ratio addressing a smaller number".¹⁹⁵

Target/impact – overall EU-wide spending

The overall impacts on road safety 2010-2014 are assumed to be the result primarily of the EU actions during last decade together with Member State actions since 2010.

The costs at EU level are very low compared to the Member States' costs for implementation of road safety actions. The main costs for Member States are related to safety investment in infrastructure and to implementation of regulations, enforcement and education actions.¹⁹⁶

There are great variations in terms of road safety expenditure across the Member States. A general estimation of expenditure on road safety is hard to achieve. Among the reasons are that road safety expenditure is not always clearly earmarked as such but can be embedded into total project or policy costs. Road safety actions are carried out by several different responsible authorities and expenditures therefore come from several budget lines (e.g. road infrastructure maintenance, police enforcement actions, information campaigns) on several levels.

Organisation of the work also differs between Member States with different degree of centralisation and allocation of responsibility and budgets for e.g. local, sub-national and national level. Expenditure includes both running operational costs and investments in new initiatives. Member States do not report on their levels of road safety spending to the Commission.

A review of information published by Member States yielded no comparable or complete information on their spending on road safety.

The literature review identified a study by the World Health Organisation from 2009 which concluded that Member States spend very different amounts on implementing road safety strategies; on average 8.5 euros per person per year. However, these figures are based on samples from only eight countries.¹⁹⁷ The European Transport Safety Council

¹⁹⁵ Jeanne Breen, *Road safety study for the interim evaluation of Policy Orientations on Road Safety 2011-2020*, 12 February 2015, p.6

¹⁹⁶ ECORYS/SWOV, *Impact Assessment Road Safety Action Programme, Assessment for mid-term review, Final Report*, April 2005, p.63-64

¹⁹⁷ World Health Organisation, *European status report on road safety: Towards safer roads and healthier transport choices*, Copenhagen, 2009

did a similar study in 2012 based on questionnaires to Member States. They received replies from only four countries, reporting assessments ranging from 0.04 to 8 euros per capita and year.¹⁹⁸

Departing from the World Health Organisation findings, a very rough estimate could be made. With an average of 8.5 euros per capita, the total EU expenditure per year would be at least €4.3 billion for the 28 Member States or €17.2 billion for the entire period 2011-2014. This figure is neither specific nor reliable but provides a rough assumption.

The total annual EU road safety expenditure is assessed to be at least €4.3 billion for the 28 Member States.

Road safety investments are not only necessary to further reduce costs and the number of road deaths but also to keep the number of deaths and injuries down. A substantial part of the road safety costs are for the never-ending tasks such as enforcement of rules, maintenance and inspections of the roads and education of the road users.

Costs for implementation of EU legislation generally differ somewhat between Member States since some Member States already have the higher standards in place for e.g. roadworthiness testing or professional drivers' training. Others will have higher investment costs for adapting to the common EU minimum requirements. Costs can also differ between Member States because of the length of the road network or the level of ambition in road safety work.

These investments also contribute to other objectives such as reduction of congestion, smooth and efficient mobility facilitating jobs and growth, and environmental objectives e.g. via roadworthiness testing of emissions levels or eco-driving in driving licence trainings.

Costs for actions/operational objectives

The Commission *General budget* addresses road safety primarily within budget item 060205: "Support activities to the European transport policy and passenger rights including communication activities".¹⁹⁹

This is the budget line for expenses linked to the follow-up of the Policy orientations and therefore the budget relevant for this part of the evaluation. It covers funding for projects, impact assessments, studies, implementation aspects of legislation, support for knowledge and data systems such as the CARE database and the European Road Safety Observatory.

The average spending on road safety actions within this budget item has been approximately €3.55 million per year since 2011.

For the specific actions since 2011, some costs are also expected for the Member States, the industry or citizens.

A summary of identified cost assessments is found in Table 13, together with a qualitative analysis of possible cost savings by using other EU measures to reach the same result. A discussion on the possible results of using only national measures follows in Chapter 6.5.

¹⁹⁸ European Transport Safety Council, *A Challenging Start towards the EU 2020 Road Safety Target*, 6th Road Safety PIN Report, June 2012

¹⁹⁹ *General Budget of the European Union for the Financial Year 2014*, Official Journal of the European Union, volume 57, 20 February 2014, p. II/337

Table 13: Assessment of EU action costs 2011-2014

EU inputs/outputs by February 2015	Achievements by 2015	Cost of output/ implementation	Alternative options: other tools
The Directive 2006/126/EC on driving licences entered fully into force on 19 January 2013.	Raised minimum standards for driver training and testing: minimum standards for driving examiners in all Member States as from on 19 January 2013.	Cost not identified: possible increase in costs for citizens and drivers as a result of more thorough testing.	EU-level intervention by non-binding action could have been done but would not have guaranteed an as broad uptake.
	Progressive access of young people to the heaviest motorcycles in all Member States as from 19 January 2013.	Cost not identified: possible increase in costs for citizens and drivers as a result of more thorough testing/training	Non-binding action would not have guaranteed an equal application of the rules across the EU.
In 2012, obligatory testing on the competence to drive in a safe, economically and environmentally friendly way was introduced. ²⁰⁰	Raised minimum standards for driver training and testing: more thorough testing of heavy vehicle drivers as from 1 January 2014.	Cost not identified: possible increase in costs for companies and drivers as a result of more thorough testing.	EU-level intervention by non-binding action would not have guaranteed an as broad uptake.
Periodic training for the Certificate of Professional Competence has started in most Member States	Raised minimum standards for training of professional drivers	Cost not identified: possible increase in costs for companies and drivers as a result of more thorough training.	EU-level intervention by non-binding action could have been done but would not have guaranteed an as broad uptake.
Directive 2015/413 on cross-border information exchange for the enforcement of road safety related traffic offences adopted on 11 March 2015.	Non-resident drivers can be penalised for dangerous road traffic offences as from 6 May 2015 in all Member States except Denmark, Ireland and the UK where the Directive is to be transposed at the latest by 6 May 2017.	The total costs for the EU were globally assessed at €5-10 million plus an annual cost of €5-6.5 million for added operational costs for enforcement ²⁰¹ ; the costs are to some degree covered by the increased amount of fines expected to be paid by the offending drivers.	EU-level intervention by non-binding action could have been done but would not have guaranteed as broad and quick uptake.
Evaluation studies on speed limiters ²⁰² and	Studies completed and used as input into on-going review of the	No implementation cost; cost of studies €124 616 and €250 000 respectively.	Not applicable

²⁰⁰ Directive 2012/36/EU of 19 November 2012 amending Directive 2006/126/EC on driving licences

²⁰¹ Commission Staff Working Document accompanying the Proposal for a Directive of the European Parliament and of the Council facilitating cross-border enforcement in the field of road safety: full impact assessment, SEC(2008) 351/2, p.27

²⁰² Transport and Mobility Leuven, Ex-post evaluation of Directive 92/6/EEC on the installation and use of speed limitation devices for certain categories of motor vehicles in the Community, as amended by Directive 2002/85/EC, 9 August 2013, http://ec.europa.eu/transport/road_safety/pdf/vehicles/speed_limitation_evaluation_en.pdf

EU inputs/outputs by February 2015	Achievements by 2015	Cost of output/ implementation	Alternative options: other tools
alcohol interlocks ²⁰³ were completed in 2013.	General Safety Regulation 661/2009.		
Enforcement planning discussed in road safety plan guidelines document published 2013.	No concrete result identified yet.	No cost expected	For harmonised format and minimum standards an EU-level discussion is required but not necessarily in binding format.
<p>The infrastructure directive principles already apply mandatorily on TEN-T roads.</p> <p>No formal conditionality but strong encouragement of applying the principles beyond the TEN-T roads included in partnership agreements and operational programmes.</p> <p>Active promotion of the infrastructure safety management principles by the Commission in communication with stakeholders.</p>	<p>EU-funded TEN-T road projects are managed in line with the infrastructure safety principles.</p> <p>At least one road infrastructure safety management procedure is also applied beyond the TEN-T road network in at least two thirds of the Member States²⁰⁴</p>	<p>Member States do not report on costs and benefits of applying the road infrastructure safety management principles²⁰⁵, but rough average cost estimates are:</p> <p>Impact assessments, <1% of total project cost</p> <p>Audits, €8500/km road</p> <p>Inspections, €8700/km road</p> <p>Network safety management €230/km road²⁰⁶</p>	<p>For TEN-T roads: EU-level intervention by non-binding action could have been done but would not have guaranteed as broad and quick uptake.</p> <p>For application of the principles beyond the TEN-T roads: legislation could be an option for broader and more equal application across the EU</p>
Regulation (EU) 168/2013 on type approval for two- and three-wheeled vehicles has been revised.	More safety measures such as ABS in all new motorcycles as from 1 January 2016.	<p>ACEM assessment of cost of equipping one motorcycle with ABS: €230-530.²⁰⁷</p> <p>Possible higher costs for consumers when vehicles are fitted with more expensive equipment.</p>	EU-level intervention by non-binding action unlikely to achieve the same result.

²⁰³ Ecorys/COWI, *Study on the prevention of drink-driving by the use of alcohol interlock devices*, 18 February 2014, http://ec.europa.eu/transport/road_safety/pdf/behavior/study_alcohol_interlock.pdf

²⁰⁴ Transport and Mobility Leuven, *Study on the effectiveness and on the improvement of the EU legislative framework on road infrastructure safety management (Directive 2008/96/EC)*, 5 December 2014, p.26 and p.49

²⁰⁵ Transport and Mobility Leuven, *Study on the effectiveness and on the improvement of the EU legislative framework on road infrastructure safety management (Directive 2008/96/EC)*, 5 December 2014, p.7

²⁰⁶ Transport and Mobility Leuven, *Study on the effectiveness and on the improvement of the EU legislative framework on road infrastructure safety management (Directive 2008/96/EC)*, 5 December 2014, p.53

²⁰⁷ ACEM, Press release 28 February 2012, <http://www.acem.eu/index.php/media-corner/press-releases/84-motorcycle-industry-deplores-that-imco-impact-assessment-did-not-cast-any-light-on-the-effects-of-new-motorcycle-legislation>

EU inputs/outputs by February 2015	Achievements by 2015	Cost of output/ implementation	Alternative options: other tools
Updated Directives on periodic roadworthiness testing, roadside checks on commercial vehicles and registration documents for vehicles adopted on 3 April 2014.	More thorough and efficient checking of vehicles in all Member States as from 20 May 2018.	Implementation by Member States: approximately €3347 million. ²⁰⁸ Possible higher costs for consumers and companies when vehicles require more frequent and thorough testing.	EU-level intervention by non-binding action would not have guaranteed an as broad uptake.
Staff working document adopted on 3 October 2014 ²⁰⁹ . A study on Event Data Recorders was completed in 2014.	Information contributed as input into on-going review of the General Safety Regulation 661/2009.	Cost not identified for the possible future revisions of the General Safety Regulation. Cost of EDR study: €99 750	Not applicable
Regulation (EU) 407/2011 on vehicle electric safety has been adopted.	Harmonised rules on vehicle electric safety apply in all Member States as from 4 December 2012	Cost not identified.	EU-level intervention by non-binding action unlikely to achieve the same result.
Implementing measures of the General Safety Regulation have been adopted.	All new cars equipped with Electronic Stability Control and Tyre Pressure Monitoring System since 1 November 2014, was phased in over 2-3 years. All new heavy goods and passenger vehicles equipped with Lane Departure Warning and Advanced Emergency Braking, phased in as from 1 November 2013 to 1 November 2015.	Costs identified in impact assessment Annex II tables 1 and 3 SEC(2008)1908, €2600 for heavy vehicles and €1290 for light vehicles (when previously not fitted), possible higher costs for consumers and companies when vehicles are fitted with more expensive equipment. ²¹⁰	EU-level intervention by non-binding action unlikely to achieve the same result.
Decision No 585/2014/EU on the deployment of the interoperable EU-wide eCall service was adopted in May 2014. Proposal on mandatory fitting of eCall in cars	Public infrastructure for eCall to be ready no later than 1 October 2017.	Costs for Member States to upgrade their public emergency call infrastructure (extent of costs not identified). Possible higher costs for consumers and companies when vehicles are fitted with more expensive	Unsatisfactory results with only non-binding rules.

²⁰⁸ Commission Staff Working Document: *Impact assessment on the Roadworthiness package*, SWD(2012)206 final 2, Brussels, 13 July 2012

²⁰⁹ Commission Staff Working Document *on the implementation of objectives 4 and 5 of the European Commission's policy orientations on road safety 2011-2020 – deployment of vehicle technologies to improve road safety*, SWD(2014) 297, Brussels, 3 October 2014

²¹⁰ Between 1993 and 2011, the Commission published the annual "Report on car prices within the European Union" ("Car Price Report"). This report has however been discontinued and an overview of the development of vehicle prices in the EU since 2011 is not available at the time of this evaluation. In the last decade, vehicle prices generally decreased; for example 2009-2010 the real car prices (adjusted for inflation) decreased EU-wide by 2.5%: Commission *Car price report 2011*, http://ec.europa.eu/competition/sectors/motor_vehicles/prices/archive.html

EU inputs/outputs by February 2015	Achievements by 2015	Cost of output/ implementation	Alternative options: other tools
and light goods vehicles is discussed.		equipment.	
Common EU definition defined, methodology for data reporting agreed and first new data to be reported during first half of 2015	New data arrival enables cost-benefit analysis on serious road injuries for possible future measures to reduce severity of crash outcomes.	Cost not identified: Member State may have administrative costs for transforming the data collection process.	Legislative action could have been considered but would have taken longer and would not necessarily have yielded better result.
Analysis of emergency brake systems/pedestrian detection in the Staff working document adopted on 3 October 2014 ²¹¹ .	Information contributed for the on-going review of the General Safety Regulation 661/2009.	Cost not identified: possible future higher costs for consumers and companies if vehicles are fitted with more expensive equipment.	Not applicable
Updated Directive on periodic roadworthiness testing adopted on 3 April 2014, provides for technical inspections of motorcycles.	Motorcycles to undergo periodic technical inspections in all ²¹² Member States as from 20 May 2018.	Cost not identified: possible higher costs for consumers in the Member States where motorcycles require more frequent and thorough testing following the new legislation.	EU-level intervention by non-binding action would not have guaranteed an as broad uptake.
Recommendations on road safety in sustainable urban mobility planning adopted on 17 December 2013.	No concrete result identified yet.	Cost not identified: local authorities may have future costs for implementing the sustainable urban mobility plans, including development of safe infrastructure for vulnerable road users.	Not applicable
Regular publication of updated road safety facts and figures on the Commission road safety website.	Safety information is accessible to road users: The European Commission website has more than 2 million page views per year.	Approximately €260 000 for 2011-2014. No costs for Member States, citizens or companies.	Not applicable
Setting up of the Going Abroad website.	Safety information is accessible to road users: more than 225 000 page views of the Commission Going Abroad website during 2014.	Costs are part of the overall website management costs mentioned above. No costs for Member States, citizens or companies.	Not applicable
Launch of the Going Abroad	Safety information is accessible to road users:	€132,000 for developing the app.	Not applicable

²¹¹ Commission Staff Working Document on the implementation of objectives 4 and 5 of the European Commission's policy orientations on road safety 2011-2020 – deployment of vehicle technologies to improve road safety, SWD(2014) 297, Brussels, 3 October 2014

²¹² Member States can decide not to implement this rule only if they undertake other actions rendering similar results for safety of motorcyclists

EU inputs/outputs by February 2015	Achievements by 2015	Cost of output/ implementation	Alternative options: other tools
information app in June 2014.	more than 73 000 downloads of the Going Abroad app by February 2015.	No costs for Member States, citizens or companies.	
Running the web-platform "European Road Safety Charter"	Safety information is accessible to road users: The "European Road Safety Charter" has around 42,000 visits per year.	€899 500 for 2013-2015. No costs for Member States, citizens or companies.	Not applicable

In addition to the specific Policy orientations budget, transport safety issues are mentioned as one of the objectives for budget item 06020103 under the Connecting Europe Facility: "Optimising the integration and interconnection of transport modes and enhancing the interoperability, safety and security of transport"²¹³ and for budget item 08020304 under Horizon 2020: "Achieving a European transport system that is resource-efficient, environmentally friendly, safe and seamless"²¹⁴. Other EU funds can also have road safety effects, for example grants from the European Regional Development Fund or the Cohesion Fund to road infrastructure projects.

6.4. Coherence

Question:

- Do the EU road safety policy objectives contradict or complement other EU policy objectives (e.g. environmental, social or economic)?

The road safety target of halving the number of road deaths and the road safety actions that have been described above have been matched against key policy objectives in other EU policy areas. A literature review was done on the possible correlations between the road safety objectives and EU economic, social and environmental objectives.

While no direct contradictions were found, some potential indirect inconsistencies could be identified, as discussed below.

Economic policy objectives

In the area of economic policy, the Commission has a clear commitment to economic growth and development.

There has been a positive correlation between the long-term economic growth in EU Member States and the improved road safety²¹⁵. The mechanisms involved include better maintained roads, safer vehicles and more investments in road user education and enforcement of the traffic rules.

However, in the short term, economic development can also work the other way round. Recent studies have shown that, other things being equal, an annual decrease of GDP per capita seems to lead to an annual

Economic growth does not always result in better road safety in the short term.

²¹³ *General Budget of the European Union for the Financial Year 2014*, Official Journal of the European Union, volume 57, 20 February 2014, p. II/332

²¹⁴ *General Budget of the European Union for the Financial Year 2014*, Official Journal of the European Union, volume 57, 20 February 2014, p. II/416

²¹⁵ Yannis et.al., *Effect on GDP changes on road traffic fatalities*, Safety Science 63, 2014, p. 47

decrease in mortality rates.²¹⁶ The main explanation for the negative relation between economy and road safety is the reduction of traffic in recession years. Other likely factors involved are reduction of speed (mainly because of increased fuel prices) and reduction in risky behaviours as young people will have less access to cars.²¹⁷

One study concludes that "Overall, it is expected that, although traffic fatality trends will continue to decrease over time, as the overall level of prosperity of European countries and the road safety awareness, culture and policy efforts increase, at periods of economic recession there may be important road safety additional "benefits"". ²¹⁸ This means that, on average, good economic development leads to road safety improvement but short-term economic recession can lead to even larger road safety gains.

It could therefore be the case that, in the short-term, the EU policy objective of economic growth may be in contradiction to the target of increased road safety, even though economic growth is conducive to improved road safety on the long term.

Improved road safety leads to cost savings, releasing funds that could instead be used for investments in jobs and growth. The World Health Organisation estimates that the road traffic crashes in the EU generate costs of 1-2% of annual EU GDP per year.²¹⁹ With calculations based on the estimated average statistical value of life (see Chapter 6.3.1 above), the 25,700 road deaths in 2014 in the EU resulted in an estimated cost of €46 billion. In addition, the costs of the 220,000 serious road traffic injuries amount to almost €54 billion every year.²²⁰

There is therefore a complex relation between economic development and road safety but mainly a clear complementarity between the economic and the road safety objectives.

Environmental policy objectives

EU environmental policy includes objectives relating to reduced fuel consumption and lower greenhouse gas emissions.²²¹ The Commission also aims to prevent and reduce harmful effects of environmental noise.²²²

The level of exhaust emissions (mainly carbon monoxide, nitrogen oxides, hydrocarbons and particulate matters) and the level of fuel consumption are closely related to vehicle speed.²²³ Emission levels and fuel consumption are generally at the lowest around medium speeds (40-90km/h according to the Organisation of Economic Co-operation and Development, OECD²²⁴). Reducing higher speed leads to reduced fuel consumption. A

²¹⁶ International Transport Forum, *IRTAD Research Report, Road safety and economic development*, 2015, p. 14; Yannis et.al., *Effect on GDP changes on road traffic fatalities*, *Safety Science* 63 (2014), p. 47

²¹⁷ International Transport Forum, *IRTAD Research Report, Road safety and economic development*, 2015

²¹⁸ Yannis et.al., *Effect on GDP changes on road traffic fatalities*, *Safety Science* 63 (2014), p. 49

²¹⁹ World Health Organisation, *World report on road traffic injury prevention*, 2004; World Health Organisation, *European facts and global status report on road safety 2013*, p.2

²²⁰ Ricardo-AEA, *Update of the Handbook on External Costs of Transport, Report for the European Commission DG MOVE*, 8 January 2014

²²¹ E.g. Commission White Paper, *Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system*, COM(2011)144 final, Brussels, 28 March 2011; Commission Communication, *Energy 2020: A strategy for competitive, sustainable and secure energy*, COM/2010/0639 final, 10 November 2010; Regulation (EC) No 443/2009 of the European Parliament and of the Council of 23 April 2009 setting emission performance standards for new passenger cars as part of the Community's integrated approach to reduce CO₂ emissions from light-duty vehicles, 5 June 2009; European Council *Conclusions on 2030 Climate and Energy Policy Framework*, 23 October 2014

²²² Directive 2002/49/EC on the assessment and management of environmental noise, 25 June 2002

²²³ OECD, *Speed Management*, 2006, p. 31; p.43; DaCoTA, *Integration of road safety in other policy areas: synergies and conflicts*, 2013, p.6; Juha Luoma and Michael Sivak, *Interactions of Environmental and Safety Measures for Sustainable Road Transport*, January 2011, Report no UMTRI-2011-3, The University of Michigan, Transportation Research Institute, p.15

²²⁴ OECD, *Speed Management*, 2006, p.43; also Juha Luoma and Michael Sivak, *Interactions of Environmental and Safety Measures for Sustainable Road Transport*, January 2011, Report no UMTRI-2011-3, The University of Michigan, Transportation Research Institute, p.15

reduction from 110 km/h to 90 km/h was found to lead to a 23% decrease in fuel consumption.²²⁵

Speed is also an important determinant in road safety. OECD found that speed is generally one of the top three road safety problems in their member countries, a contributing and aggravating factor in about one third of accidents.²²⁶ In general, the number and severity of road traffic accidents rise as speed increases.²²⁷

For speeds above 90 km/h there is therefore a clear synergy between the environmental objectives and the road safety objectives.²²⁸

At low speeds under 30 km/h, however, the risk of serious road crashes is drastically reduced and the noise levels decrease but the green-house gas emissions and the fuel consumption are high²²⁹, at least with traditional combustion engines. CO and CO² emissions in terms of g/km travelled are highest at very low travel speeds (15 km/h or less) with these vehicles. This potential contradiction could be reduced with the shift to more sustainable urban transport, in line with EU objectives.²³⁰

Also driving style has an impact on road safety, fuel consumptions and greenhouse gas emissions. OECD found that an aggressive driving style usually leads to approximately 30% increase in fuel consumption.²³¹ Eco-driving, as promoted in Directive 2006/126/EC on driving licences²³² and Directive 2003/59/EC qualifications and training of professional drivers²³³, is therefore an example of an action leading to fulfilment of both road safety and environmental policy objectives.

Environment and road safety policy objectives are mostly complementary to each other.

Finally, the modal shift from road transport to more eco-friendly transport modes is expected to have positive effects also on safety: lower vehicle exposure on roads leading to less crash risk.²³⁴

The possible exception is the shift from cars to bicycles in urban areas.²³⁵ Cyclists face higher risk of fatal or serious road injuries than car occupants. The European Transport Safety Council has estimated that cycling and walking have on average a 7 to 9 times higher fatality risk per distance travelled than car travel.²³⁶ However, other researchers conclude that the number of fatal road crashes involving cyclists will depend on who makes the switch: if young car drivers switched to a bicycle, it would decrease the

²²⁵ OECD, *Speed Management*, 2006, p.44

²²⁶ OECD, *Speed Management*, 2006, p.31

²²⁷ OECD, *Speed Management*, 2006, p.35

²²⁸ DaCoTA, *Integration of road safety in other policy areas: synergies and conflicts*, 2013, P.6.

²²⁹ OECD, *Speed Management*, 2006, p.43-44; Juha Luoma and Michael Sivak, *Interactions of Environmental and Safety Measures for Sustainable Road Transport*, January 2011, Report no UMTRI-2011-3, The University of Michigan, Transportation Research Institute, p.15

²³⁰ Commission White Paper, Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system, COM(2011)144 final, Brussels, 28 March 2011; Commission Communication, *A European strategy on clean and energy efficient vehicles*, COM(2010)186 final, 28 April 2010

²³¹ OECD, *Speed Management*, 2006, p.43-44

²³² Directive 2006/126/EC on driving licences (Recast), Brussels, 20 December 2006, Annex II, Art. 8.4 and 9.3.2

²³³ Directive 2003/59/EC on the initial qualification and periodic training of drivers of certain road vehicles for the carriage of goods or passengers, Brussels 15 July 2003: Annex 1, Section 1, Article 1.3

²³⁴ Juha Luoma and Michael Sivak, *Interactions of Environmental and Safety Measures for Sustainable Road Transport*, January 2011, Report no UMTRI-2011-3, The University of Michigan, Transportation Research Institute, p.7

²³⁵ Juha Luoma and Michael Sivak, *Interactions of Environmental and Safety Measures for Sustainable Road Transport*, January 2011, Report no UMTRI-2011-3, The University of Michigan, Transportation Research Institute, p.21; DaCoTA, *Integration of road safety in other policy areas: synergies and conflicts*, 2013, p.12

²³⁶ European Transport Safety Council, *Transport safety performance in the EU: A statistical overview*, 2003, p.7

number of fatal accidents whereas the opposite was found to be true for elderly car drivers.²³⁷ The risk can also be mitigated with targeted action to increase safety for cyclists.

There are therefore indicators to show that, while the environmental and road safety policy objectives are often complementary to each other, there are some areas where they might be in contradiction unless actions are taken to reduce the risks.

Social and health policy objectives

Within the public health area, the EU has adopted a strategy on alcohol abuse. One of the main priorities of the strategy is to "reduce injuries and deaths from alcohol related road traffic accidents".²³⁸ One of the operational objectives of the EU-level action plan is to "reduce alcohol related traffic accidents".²³⁹

There is also a strategy against drug abuse for the time period 2013-2020.²⁴⁰ The strategy targets drug use generally with no specific mention of drug driving. The drug strategy is accompanied by a specific action plan with reduced number of drug-driving incidents clearly mentioned as a goal.²⁴¹

Health policy objectives on alcohol and drugs support the road safety objectives.

Estimates are difficult to make since data is not collected in a comparable and complete manner but a rough assessment is that alcohol is a contributing factor in approximately 25% percent of all fatal road traffic crashes²⁴²; drugs cause a much smaller share of fatal crashes but is also considered an upcoming problem²⁴³. The efforts to reduce alcohol and drug abuse will therefore also benefit EU road safety.

Finally, the legislation on qualifications and training of professional drivers has been found to contribute not only to road safety but also to some degree to making the profession as such more attractive thanks to the link with other schooling.²⁴⁴

6.5. EU Added Value

Questions:

- To what extent could the results brought about by the EU actions have been achieved by Member States at national and/or regional level? Would it have been possible to achieve the same results without the EU intervention?

Several of the actions under the EU Policy orientations could in principle have been done also on Member States level but would then have been unlikely to have EU-wide benefits.

For example, information to citizens, national decisions to upgrade the minimum standards on roadworthiness testing or evaluation on in-vehicle safety systems can also be done by Member States themselves. However, if relying only on the Member States,

²³⁷ Jeroen Johan de Hartog, Hanna Boogaard, Hans Nijland, and Gerard Hoek, *Do the Health Benefits of Cycling Outweigh the Risks?* from *Environmental Health Perspectives*, volume 118, number 8, August 2010, p.1112

²³⁸ Communication from the Commission, *An EU strategy to support Member States in reducing alcohol related harm*, COM/2006/0625 final, Brussels, 24 October 2006

²³⁹ *Action Plan on Youth Drinking and on Heavy Episodic Drinking (Binge Drinking) (2014-2016) endorsed by the Committee on National Alcohol Policy and Action (CNAPA)*, 16 September 2014

²⁴⁰ Council Recommendation, *EU Drugs Strategy 2013-20*, (2012/C 402/01), Brussels, 29 December 2012

²⁴¹ Council Notice, *EU Action plan on drugs 2013-2016*, (2013/C 351/01), Brussels, 30 November 2013

²⁴² Ecorys/COWI, *Study on the prevention of drink-driving by the use of alcohol interlock devices*, 18 February 2014, p.34

²⁴³ Druid project, *Final Report: Work performed, main results and recommendations*, 1 August 2012, p.80

²⁴⁴ Panteia and Transport Mobility Leuven, *Ex-post evaluation study report: Study on the effectiveness and improvement of the EU legislative framework on training of professional drivers*, 13 October 2014

there would be no guarantee of an equally broad reach of the outputs or an equal access for EU citizens to the road safety benefits.

Whereas some Member States already performed such actions or applied higher safety standards than those prescribed by the EU legislation, other Member States would likely not have developed the same level of safety in the same time span without the EU input. Differences between Member States would therefore likely have remained larger without EU intervention.

In other cases, for example the Directive 2015/413 on cross-border enforcement, the alternative solution to EU action would have been a large number of cumbersome bilateral agreements.

Setting of technical standards especially on e-Call or type approval can only be done on EU level in order to support a well-functioning single market.

Many actions under the Policy orientations could also have been undertaken by the Member States but without the EU-wide reach of road safety benefits.

As discussed in Chapter 6.2 above, the EU acquis and road safety policy as a whole has also worked as a driver for enhanced road safety in new Member States following accession; this is a clear added value of EU road safety work which could not be achieved by other means.

Table 14 summarises more detailed comments on possible options for alternative actions on Member States' level.

Table 14: Assessment of alternatives to EU intervention

EU inputs/outputs by February 2015	Achievements by 2015	Alternative options: no EU intervention
The Directive 2006/126/EC on driving licences entered fully into force on 19 January 2013.	Raised minimum standards for driver training and testing: minimum standards for driving examiners in all Member States as from on 19 January 2013.	A harmonised standard across all Member States could not have been guaranteed without EU-level intervention.
	Progressive access of young people to the heaviest motorcycles in all Member States as from 19 January 2013.	A harmonised standard across all Member States could not have been guaranteed without EU-level intervention.
In 2012, obligatory testing on the competence to drive in a safe, economically and environmentally friendly way for truck and bus drivers was introduced.	Raised minimum standards for driver training and testing: more thorough testing of heavy vehicle drivers as from 1 January 2014 ²⁴⁵ .	A harmonised standard across all Member States could not have been guaranteed without EU-level intervention.
Periodic training for the Certificate of Professional Competence has started in most Member States	Raised minimum standards for training of professional drivers	A harmonised standard across all Member States could not have been guaranteed without EU-level intervention.
Directive 2015/413 on cross-border information exchange for the enforcement of road safety related traffic offences adopted on 11 March 2015.	Non-resident drivers can be penalised for dangerous road traffic offences as from 6 May 2015 in all Member States except Denmark, Ireland and the UK where the Directive is to be transposed at the latest by 6 May 2017.	An information exchange system including all Member States could have been achieved without EU-level intervention through a large number of bilateral agreements.

²⁴⁵ Directive 2012/36/EU of 19 November 2012 amending Directive 2006/126/EC on driving licences

EU inputs/outputs by February 2015	Achievements by 2015	Alternative options: no EU intervention
Evaluation studies on speed limiters ²⁴⁶ and alcohol interlocks ²⁴⁷ completed in 2013.	Studies completed and used as input into on-going review of the General Safety Regulation 661/2009.	The studies could have been carried out by Member States if any Member State would be willing to take on the cost for an EU-wide analysis
Enforcement planning discussed in road safety plan guidelines document published 2013.	No concrete result identified yet.	Enforcement implementation plans can be done individually by Member States; for harmonised format and minimum standards an EU-level discussion is required.
The infrastructure directive principles already apply mandatorily on TEN-T roads. No formal conditionality but strong encouragement of applying the principles beyond the TEN-T roads.	EU-funded TEN-T road projects are managed in line with the infrastructure safety principles. At least one road infrastructure safety management procedure is also applied beyond the TEN-T road network in at least two thirds of the Member States ²⁴⁸	It is possible that fewer Member States would apply these principles if they would not be actively promoted by the EU.
Regulation (EU) 168/2013 on type approval for two- and three-wheeled vehicles has been revised.	More safety measures such as ABS in all new motorcycles as from 1 January 2016.	A harmonised standard across all Member States unlikely without EU-level intervention; type approval legislation cannot be efficiently managed at Member State level with equal benefits for the internal market.
Updated Directives on periodic roadworthiness testing, roadside checks on commercial vehicles and registration documents for vehicles adopted on 3 April 2014.	More thorough and efficient checking of vehicles in all Member States as from 20 May 2018. (five of the Member States ²⁴⁹ already had the highest standards of roadworthiness testing before the adoption of the roadworthiness package) ²⁵⁰	Considering the wide differences between Member States before adoption of the new rules, a harmonised standard across all Member States not likely without EU-level intervention.
Staff working document adopted on 3 October 2014 ²⁵¹ . A study Event Data Recorders was completed in 2014.	Information contributed as input into on-going review of the General Safety Regulation 661/2009.	The study could have been carried out by Member States if any Member State would be willing to take on the cost for an EU-wide analysis
Regulation (EU) 407/2011 on vehicle electric safety has been adopted.	Harmonised rules on vehicle electric safety apply in all Member States as from 4 December 2012	Type approval legislation cannot be efficiently managed at Member State level with equal benefits for the internal market.
The implementing measures of the General Safety Regulation have been adopted.	All new cars equipped with Electronic Stability Control and Tyre Pressure Monitoring System since 1 November 2011. All new heavy goods and passenger	Type approval legislation cannot be efficiently managed at Member State level with equal benefits for the internal market.

²⁴⁶ Transport and Mobility Leuven, *Ex-post evaluation of Directive 92/6/EEC on the installation and use of speed limitation devices for certain categories of motor vehicles in the Community, as amended by Directive 2002/85/EC*, 9 August 2013, http://ec.europa.eu/transport/road_safety/pdf/vehicles/speed_limitation_evaluation_en.pdf

²⁴⁷ Ecorys/COWI, *Study on the prevention of drink-driving by the use of alcohol interlock devices*, 18 February 2014, http://ec.europa.eu/transport/road_safety/pdf/behavior/study_alcohol_interlock.pdf

²⁴⁸ Transport and Mobility Leuven, *Study on the effectiveness and on the improvement of the EU legislative framework on road infrastructure safety management (Directive 2008/96/EC)*, 5 December 2014, p.26 and p.49

²⁴⁹ DE, SE, BE, LUX, FI

²⁵⁰ Commission Staff Working Document: *Impact assessment on the Roadworthiness package*, SWD(2012)206 final 2, Brussels, 13 July 2012

²⁵¹ Commission Staff Working Document *on the implementation of objectives 4 and 5 of the European Commission's policy orientations on road safety 2011-2020 – deployment of vehicle technologies to improve road safety*, SWD(2014) 297, Brussels, 3 October 2014

EU inputs/outputs by February 2015	Achievements by 2015	Alternative options: no EU intervention
	vehicles equipped with Lane Departure Warning and Advanced Emergency Braking since 1 November 2011	
Decision on the deployment of the interoperable EU-wide eCall service was adopted in May 2014. Proposal on mandatory fitting of eCall devices in passenger cars and light goods vehicles is being discussed.	Public infrastructure for eCall to be ready no later than 1 October 2017.	Harmonised standard across all Member States did not happen without EU-level intervention.
Common EU definition defined, methodology for data reporting agreed and first new data to be reported during first half of 2015	New data arrival enables cost-benefit analysis on serious road injuries for possible future measures to reduce severity of crash outcomes.	Member States unlikely to have adopted a common definition and data reporting system without EU intervention.
Analysis of emergency brake systems/pedestrian detection in the Staff working document adopted on 3 October 2014 ²⁵² .	Information contributed for the on-going review of the General Safety Regulation 661/2009.	The study could have been carried out by Member States if any Member State would be willing to perform an EU-wide analysis. Type approval legislation cannot be efficiently managed at Member State level with equal benefits for the internal market.
Updated Directive on periodic roadworthiness testing adopted on 3 April 2014, provides for technical inspections of motorcycles.	Motorcycles to undergo periodic technical inspections in all ²⁵³ Member States as from 20 May 2018.	Considering the wide differences between Member States before adoption of the new rules, a harmonised standard across all Member States not likely without EU-level intervention.
Recommendations on road safety in sustainable urban mobility planning adopted on 17 December 2013.	No concrete result identified yet.	EU-level intervention likely to yield larger uptake of the sustainable urban mobility planning principles compared to scenario with no EU intervention.
Regular publication of updated road safety facts and figures on the Commission road safety website.	Safety information is accessible to road users: more than 2 million page views per year.	Unlikely to have same outreach if not hosted by the European Commission. Commission owns and manages the CARE database providing the figures that are published.
Setting up of the Going Abroad website.	Safety information is accessible to road users: more than 225 000 page views during 2014.	Unlikely to have been created as EU-level tool by Member States; unlikely to have same outreach across all EU if not promoted by the European Commission.
Launch of the Going Abroad information app in June 2014.	Safety information is accessible to road users: more than 73 000 downloads of the Going Abroad app by February 2015.	Unlikely to have been created as EU-level tool by Member States; unlikely to have same outreach across all EU if not promoted by the Commission.

²⁵² Commission Staff Working Document on the implementation of objectives 4 and 5 of the European Commission's policy orientations on road safety 2011-2020 – deployment of vehicle technologies to improve road safety, SWD(2014) 297, Brussels, 3 October 2014

²⁵³ Member States can decide not to implement this rule only if they undertake other actions rendering similar results for safety of motorcyclists

EU inputs/outputs by February 2015	Achievements by 2015	Alternative options: no EU intervention
Running the web-platform "European Road Safety Charter".	Safety information is accessible to road users: The "European Road Safety Charter" has around 42,000 visits per year.	Unlikely to have same outreach if not hosted by the European Commission.

7. CONCLUSIONS

The number of road fatalities is decreasing in the EU. The number of road deaths dropped by 18.4% from 2010 to 2014. The differences between Member States are decreasing over time.

The best improvement is observed for those younger than 25 years and for the motorised road users. However, the majority of those killed on the roads are car occupants and motorcycle riders and the young remain heavily over-represented among crash victims. The young people, the car drivers and the motorcyclists therefore required continued attention.

The improvement is much more limited for the vulnerable road users (pedestrians and cyclists) and for the elderly road users (older than 65 years). The fatality rates for these groups are not decreasing as fast, indicating that vulnerable road user safety needs further consideration.

Serious road traffic injuries are not decreasing as quickly as fatalities. The number of serious injuries on the roads each year is substantial: there are 8 to 9 people reported to be seriously injured for every reported road death²⁵⁴. The EU has currently no strategic target for the reduction of serious road traffic injuries.

- *Implementation of actions: taking stock*

Work is well under way within all the seven focus areas and several main milestones have already been completed. Two important legislative packages have been concluded on roadworthiness testing and on the cross-border enforcement of road traffic rules; revisions of the vehicle approval legislation have also been completed and further revisions are ongoing, notably on the General Safety Regulation.

Actions remain to be carried out especially in the area of cooperative intelligent transport systems and advanced driver assistance technologies. The development of eCall continues. There is still much scope for further work on the serious road traffic injuries, including identification of possible actions that could contribute to reducing the number of serious injuries.

Reviews of the infrastructure safety management rules and the rules on initial qualification and periodic training of professional drivers are on-going. Monitoring and follow-up of the legislation currently in place, analysis of road safety trends and contribution of road safety information to citizens are tasks that will continue throughout the strategy period.

- *Relevance of policy framework*

The policy framework remains relevant. The strategic target, the focus areas and the specific actions address the main road safety problems. In order to achieve the target, a complete and holistic framework will be needed also for the coming years, addressing both motorised and vulnerable road users.

²⁵⁴ Based on the old reporting system

Serious road traffic injuries are addressed by the policy framework but not by a specific target. The target on fatalities has been considered a useful tool by all stakeholders participating in the consultation. The decrease in serious road traffic injuries lags behind the fatality decrease. In order to better cover all serious road safety outcomes a specific serious injury target could complement the fatality target.

If a serious injury target would be set with the same level of ambition as the fatality target (a 50% decrease between 2010 and 2020), the target level would be a 35% decrease between 2015 and 2020.²⁵⁵

The continued over-representation of men among road traffic victims is not addressed by the current policy framework. Therefore, it could be considered to add a gender aspect in future road safety policy frameworks.

- *Prognosis for the strategic fatality target*

For the remainder of the strategy period, an annual average decrease of 7.8% is needed in order for the strategic target of 50% between 2010 and 2020 to be reached. This is a challenging but not impossible ambition.

In order to strengthen the chances of reaching the target, additional efforts will be needed. Measures to improve the safety for the vulnerable road users seem to be needed since the fatality rates for these groups decrease less than average.

Implementation of the measures agreed and adopted at EU level is an essential element. The actions with quicker impact are most likely carried out on national level, for example enforcement of traffic rules and especially targeting speeding offences.

- *Effectiveness of EU actions*

It is clear that the EU is the safest region world-wide, that the differences between Member States are decreasing over time, that new Member States usually make big road safety progress in the years following accession and that the average fatality decrease rate has speeded up since the adoption of the first EU-level strategic road safety target. Together, these facts indicate that the EU indeed has a significant effect on road safety.

The different trends for specific indicators, for example age groups and causal factors can in some cases be interpreted as showing effects of individual EU actions; in other cases it is more difficult to draw any clear conclusions, for example from the different trends for different road user groups and road types.

The exact extent of EU effects on road safety outcomes could not be measured; this was expected due to the complex road safety context. It is not possible to isolate the results of Member State actions from those of EU actions.

Other external factors (financial crisis, demographic changes, climate change) have also been investigated but could not be shown to have had any major impact on the road safety results in the period 2010-2014.

- *Efficiency of EU actions*

The exact costs and savings could not be measured but based on the rough estimates made, it is deduced that the annual cost savings from the road safety progress made so far have been much higher than the annual total expenditure on road safety actions.

²⁵⁵ -35% in five years equals an annual decrease rate of 6.7%, same annual decrease as -50% in ten years.

It is therefore concluded that the results have been achieved at a reasonable cost. It is inferred that no other measures would have been likely to have yielded as broad, far-reaching results with benefits for the entire EU.

- *Coherence of policy objectives*

The road safety policy objectives are well in line with most of the other main policy objectives investigated such as environmental, economic and social policy objectives. Only three possible exceptions to the general complementarity were identified which could however be resolved within the current policy.

In the short term, there is a possibility that economic growth does not support a quicker road fatality reduction, mostly linked to increased traffic volumes in times of strong economic development, which would however be levelled out over time.

Promoting low-speed zones in sensitive areas could contradict the environmental objective of reducing fuel consumption and emissions due to the fact that low speeds increase road safety but are not optimal from emissions point of view. A shift to more sustainable urban transport could be a solution.

There could also be increased road safety risks following promotion of sustainable transport modes like walking and cycling, unless measures are taken to ensure safe mobility also for pedestrians and cyclists.

- *Added value of EU contribution*

An assessment was made of possible alternative ways to reach the same results; it is concluded that the EU actions have indeed had an added value, especially for the Member States with low levels of road safety where the EU actions are likely to have pushed developments more quickly than what would otherwise have been the case.

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1. ANNEX: ROAD SAFETY LEGISLATION IN PLACE 2010

Legislation	Target/objective	Date of transposition/application
<p>Directive 2006/126/EC on driving licences (recast), OJ L 403, 30.12.2006, p.18.</p> <p>Amended by</p> <ul style="list-style-type: none"> • Commission Directive 2009/113/EC • Commission Directive 2011/94/EU 	<p>Safer drivers (motorcycles, cars, light and heavy goods vehicles, buses, other).</p>	<p>Application in phases; full application including the main novelties such as new driving licence model, new licence categories and minimum requirements on driving licence examiners since 19 January 2013.</p>
<p>Directive 2003/59/EC on the initial qualification and periodic training of drivers of certain road vehicles for the carriage of goods or passengers, amending Council Regulation (EEC) No 3820/85 and Council Directive 91/439/EEC and repealing Council Directive 76/914/EEC, OJ L 226, 10.9.2003, p.4.</p> <p>Amended by</p> <ul style="list-style-type: none"> • Council Directive 2004/66/EC • Council Directive 2006/103/EC • Regulation (EC) No 1137/2008 • Council Directive 2013/22/EU 	<p>Safer driving by professional drivers of heavy goods vehicles and buses.</p>	<p>The rules apply for bus drivers since 10 September 2008 and for drivers of heavy goods vehicles since 10 September 2009.</p>
<p>Council Directive 92/6/EEC on the installation and use of speed limitation devices for certain categories of motor vehicles in the Community, OJ L 57, 2.3.1992, p. 27.</p> <p>Amended by</p> <ul style="list-style-type: none"> • Directive 2002/85/EC 	<p>Reduced speeding: safer driving of heavy goods vehicles and buses.</p> <p>Reduced risk of crashes and reduced severity of crash outcomes.</p>	<p>Speed limitation devices had to be applied to category M3 vehicles having maximum mass of more than 10 tonnes and category N3 vehicles from 1 January 1996. For the other vehicle categories, the speed limitation devices had to be applied from 1 January 2007.</p>
<p>Directive 2004/54/EC on minimum safety requirements for tunnels in the trans-European road network, OJ L 201, 7.6.2004, p. 56.</p> <p>Amended by</p> <ul style="list-style-type: none"> • Regulation (EC) No 596/2009 	<p>Safer road tunnels on the TEN-T network.</p>	<p>30 April 2014: tunnels concerned have to meet the minimum safety technical requirements in Annex I of the Directive.</p> <p>30 April 2019: Some Member States with a high number of tunnels have 5 additional years to finish the refurbishment.</p>
<p>Directive 2008/96/EC on road infrastructure safety management, OJ L 319, 29.11.2008, p.59.</p>	<p>Safer roads on the TEN-T network (mandatory) and beyond (voluntary).</p>	<p>The deadline for transposition was 19 December 2010.</p>
<p>Directive 2009/40/EC on roadworthiness tests for motor vehicles and their trailers, OJ L 141, 6.6.2009, p.12. Recast of Directive 96/96/EC.</p> <p>Amended by</p> <ul style="list-style-type: none"> • Commission Directive 2010/48/EU • Commission Recommendation 2010/378/EU 	<p>Safer vehicles (cars, light and heavy goods vehicles, buses).</p>	<p>Directive 2009/40/EC: no transposition as it is a recast of Directive 96/96/EC which had to be transposed by 9 March 1998.</p> <p>Commission Directive 2010/48/EU: 31 December 2011.</p>

Legislation	Target/objective	Date of transposition/application
<p>Directive 2000/30/EC on the technical roadside inspection of the roadworthiness of commercial vehicles circulating in the Community, OJ L 203, 10.8.2000, p.1.</p> <p>Amended by</p> <ul style="list-style-type: none"> • Commission Directive 2003/26/EC • Commission Directive 2010/47/EU • Commission Recommendation 2010/378/EU 	<p>Safer vehicles (heavy goods vehicles, buses).</p>	<p>Directive 2000/30/EC: 10 August 2002.</p> <p>Commission Directive 2003/26/EC: 1 January 2004.</p> <p>Commission Directive 2010/47/EU: 1 January 2012.</p>
<p>Council Directive 1999/37/EC of 29 April 1999 on the registration documents for vehicles, OJ L 138, 1.6.1999, p. 57.</p> <p>Amended by</p> <ul style="list-style-type: none"> • Commission Directive 2003/127/EC • Council Directive 2006/103/EC 	<p>Harmonised set of content on vehicle registration documents.</p>	<p>Transposed since 1 June 2004.</p>
<p>Council Directive 91/671/EEC relating to the compulsory use of safety belts and child-restraint systems in vehicles, OJ L 373, 31.12.1991, p.26.</p>	<p>Safety of car occupants: reduced severity of crash outcomes.</p>	<p>The deadline for transposing of Directive 91/671/EEC into national law was 1 January 1993; that of Directive 2003/20/EC was 9 May 2006</p>
<p>Framework Directive 2007/46/EC on vehicle approval, OJ L 263, 9.10.2007, p.1 and its particular acts</p>	<p>Harmonised safety requirements for all cars, trucks and buses sold in the EU</p>	<p>The framework applies from 29 April 2009 with certain articles of the annexes applying at the latest from 2014. Its particular acts cover 70 different vehicle areas.</p>
<p>Regulation (EC) No 661/2009 concerning type-approval requirements for the general safety of motor vehicles, their trailers and systems, components and separate technical units intended therefor, OJ L 200, 31.7.2009, p. 1-24</p>	<p>Safety of motor vehicles.</p>	<p>The Regulation applies from 1 November 2011 with certain articles of the annexes applying from 2009, 2014 and 2017 respectively.</p>
<p>Directive 2002/24/EC relating to the type-approval of two or three-wheel motor vehicles and repealing Council Directive 92/61/EEC, OJ L 124, 9.5.2002, p. 1-44</p>	<p>Safety of motorcycles and other two- and three-wheelers</p>	<p>Directive 2002/24/EC: deadline for transposition was 9 May 2003.</p>
<p>Regulation (EC) No 78/2009 on the type-approval of motor vehicles with regard to the protection of pedestrians and other vulnerable road users, amending Directive 2007/46/EC and repealing Directives 2003/102/EC and 2005/66/EC, OJ L 35, 4.2.2009, p. 1-31</p>	<p>Safety of vulnerable road users.</p>	<p>The Regulation applies from 24 November 2009.</p>
<p>Directive 2007/38/EC on the retrofitting of mirrors to heavy goods vehicles registered in the Community, OJ L 184, 14.7.2007, p.25.</p>	<p>Reduced risk of crashes with heavy goods vehicles; increased safety of vulnerable road users.</p>	<p>All vehicles concerned had to be retrofitted with the new mirrors by 31 March 2009.</p>
<p>Council Directive 89/459/EEC on the approximation of the laws of the Member States relating to the</p>	<p>Safety of vehicles (cars); reduced risk of crashes.</p>	<p>Implementation date 1 January 1992.</p>

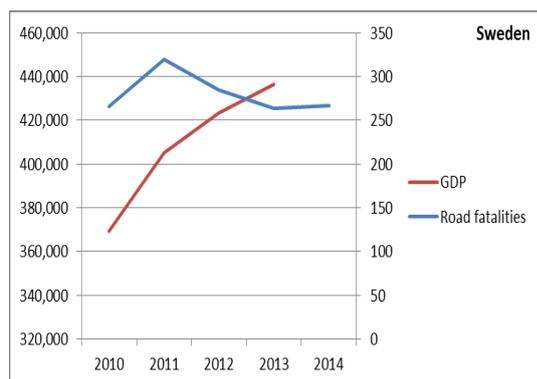
Legislation	Target/objective	Date of transposition/application
tread depth of tyres of certain categories of motor vehicles and their trailers, OJ L 226, 3.8.1989, p.4.		
Directive 2010/40/ on the framework for the deployment of Intelligent Transport Systems in the field of road transport and for interfaces with other modes of transport, 7 July 2010, OJ L 207, 6.8.2010, p. 1-13	Specifications and standards for ITS road safety and security applications	27 February 2012
Action plan for the deployment of Intelligent Transport Systems in Europe , COM/2008/0886 final, 16 December 2008	Actions for development and evaluation of cooperative systems, the open in-vehicle platform architecture, specifications for vehicle to infrastructure and vehicle to vehicle communication, the promotion of advanced driver assistance systems, the 'Safe on-board human-machine interface, etc.	2008-2014 (target dates for proposed actions)
Directive 2010/35/EU on transportable pressure equipment and repealing Council Directives 76/767/EEC, 84/525/EEC, 84/526/EEC, 84/527/EEC and 1999/36/EC, OJ L 165, 30.6.2010, p.1	Safer transport of dangerous goods: rules for the safety of transportable pressure equipment.	Date for transposition and implementation was 1 July 2011.
Directive 2008/68/EC on the inland transport of dangerous goods , OJ L 260, 30.9.2008, p.13.	Safer transport of dangerous goods.	Directive 2008/68/EC was to be transposed by 1 July 2009.
Council Directive 95/50/EC on uniform procedures for checks on the transport of dangerous goods by road , OJ L 249, 17.10.1995, p.35. Amended by <ul style="list-style-type: none"> • Directive 2001/26/EC of 7 May 2001, OJ L 16, 23.6.2001, p.23. • Commission Directive 2004/112/EC of 13 December 2004, OJ L 367, 14.12.2004, p.23. • Directive 2008/54/EC of 17 June 2008, OJ L 162, 21.6.2008, p.11. 	Safer transport of dangerous goods.	The transposition deadline was 1 January 1997.
Council Decision 93/704/EC on the creation of a Community database on road accidents , OJ L 329, 30.12.1993, p.63-65 Amended by <ul style="list-style-type: none"> • Regulation (EC) No 1882/2003 	Road safety data collection for better analysis and monitoring of results.	The data has been submitted since 31 March 1994.

2. ANNEX: ROAD FATALITY DEVELOPMENT AND THE CHANGE IN GDP (MILLION EURO PER YEAR) 2010-2014²⁵⁶

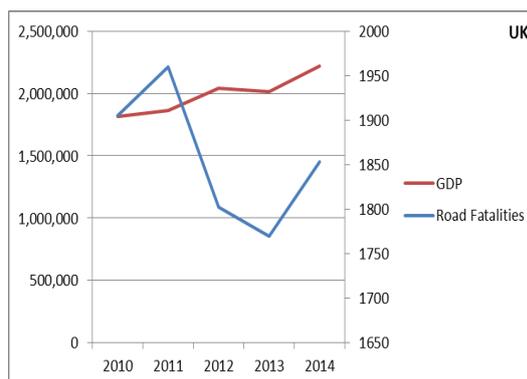
1. Patterns among the five EU Member States with lowest road fatality rate in 2014

In four of these cases, the GDP has increased over time but the number of reported fatalities fluctuates with no clear correlation to the GDP trend. In Spain the GDP decreased during the first three years and so did the number of road deaths. The fatality decrease slowed down somewhat in the same year the GDP began to increase.

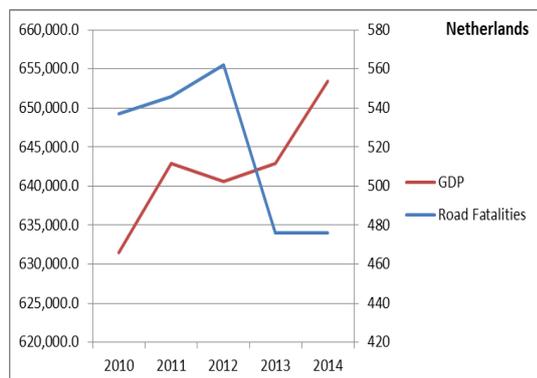
Sweden: GDP increase; Road fatalities increase, then decrease



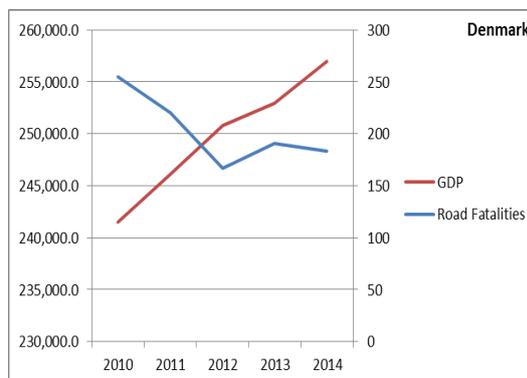
UK: GDP increase; Road fatalities increase, decrease, increase



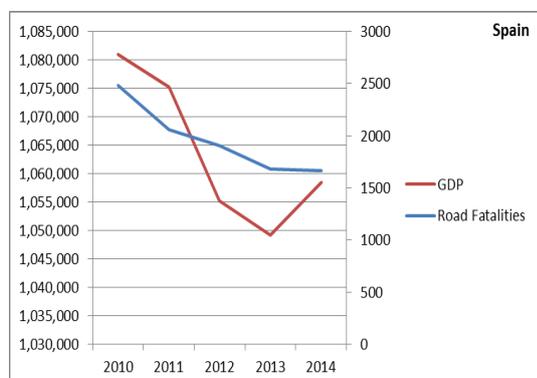
Netherlands: GDP increase; Road fatalities increase, then decrease



Denmark: GDP increase; Road fatalities decrease, then increase



Spain: GDP decrease, then increase; Road fatalities decrease

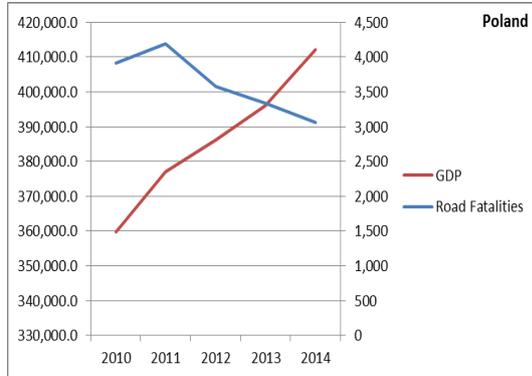


²⁵⁶ GDP from Eurostat, road fatality numbers from the CARE database; GDP data for Estonia, Greece, Ireland, Lithuania and Sweden not yet reported for 2014 at the time of the evaluation.

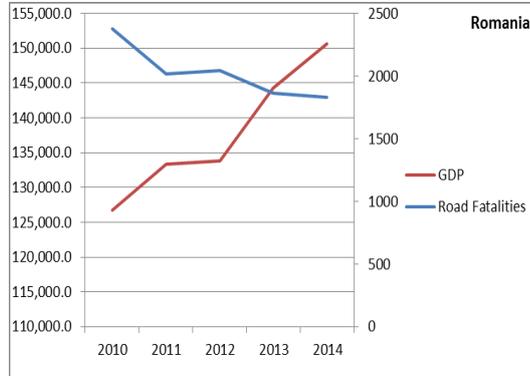
2. Patterns among the five EU Member States with highest road fatality rate in 2014

In four of these cases, the GDP has increased over time and the road fatalities decreased. It should be noted that Latvia however reports an increased number of fatalities in 2014. In Lithuania both GDP and road fatalities decreased over this period.

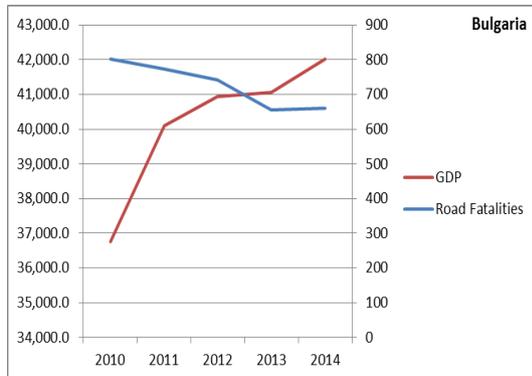
Poland: GDP increase; Road fatalities decrease



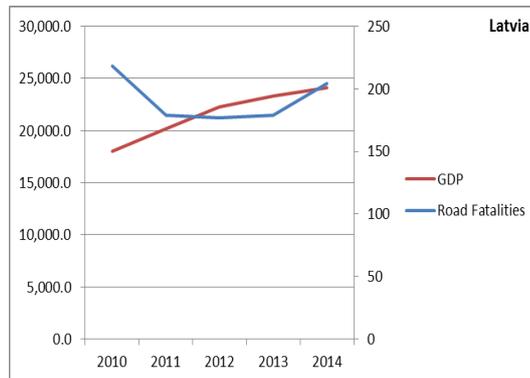
Romania: GDP increase; Road fatalities decrease



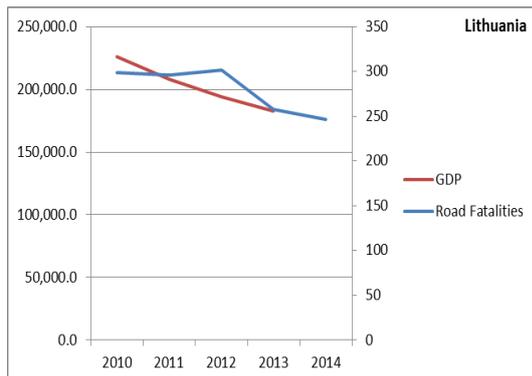
Bulgaria: GDP increase; Road fatalities decrease



Latvia: GDP increase; Road fatalities decrease, then increase



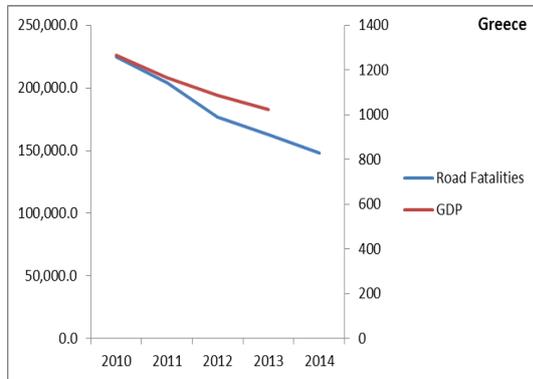
Lithuania: GDP decrease; Road fatalities decrease



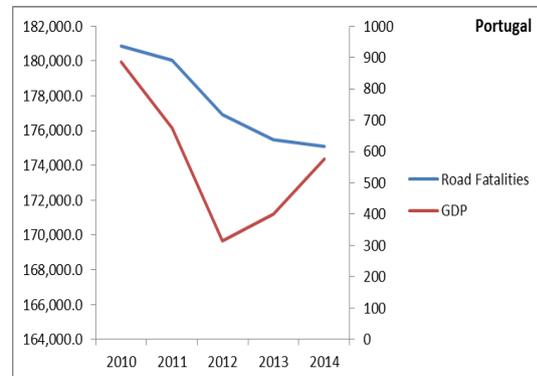
3. Patterns among the five EU Member States with highest reduction of road fatalities 2010-2014

Road fatalities decrease both in the three countries where GDP is mostly decreasing and in the two countries with GDP increase.

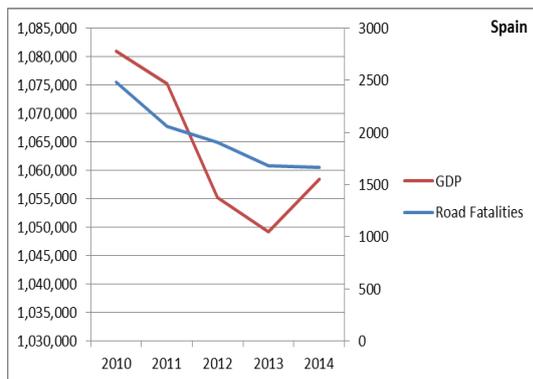
Greece: GDP decrease; Road fatalities decrease



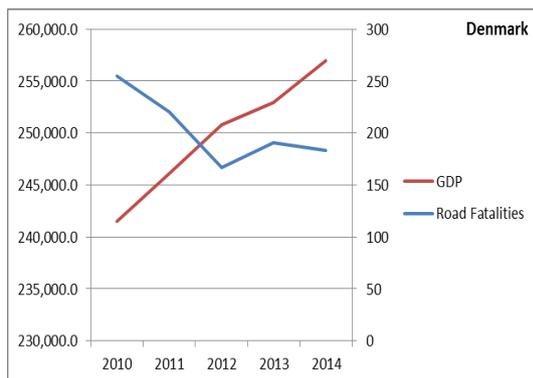
Portugal: GDP decrease, then increase; Road fatalities decrease



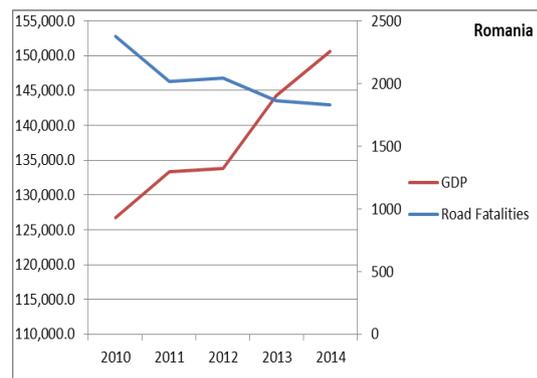
Spain: GDP decrease, then increase; Road fatalities decrease



Denmark: GDP increase; Road fatalities decrease, then increase



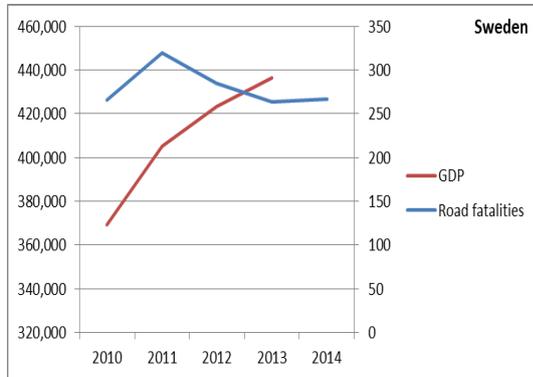
Romania: GDP increase; Road fatalities decrease



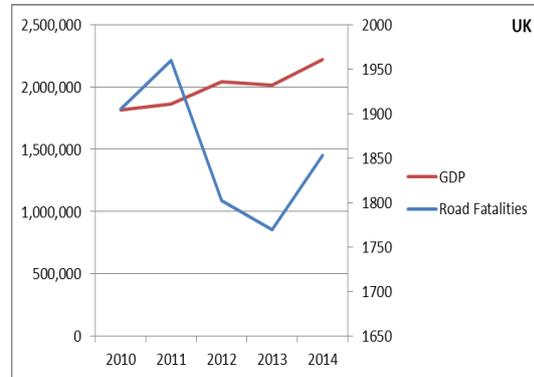
4. Patterns among the five EU Member States with lowest reduction of road fatalities 2010-2014.

While GDP increases in all these five countries over time, the road fatality trends fluctuate in different ways with no clear common pattern.

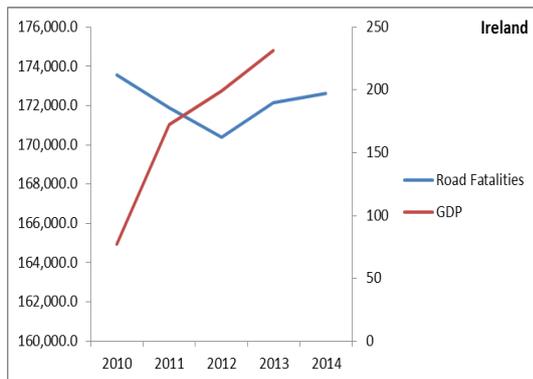
Sweden: GDP increase; Road fatalities increase, then decrease



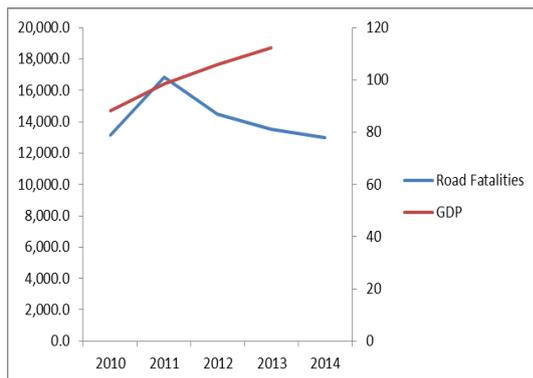
UK: GDP increase; Road fatalities increase, decrease, increase



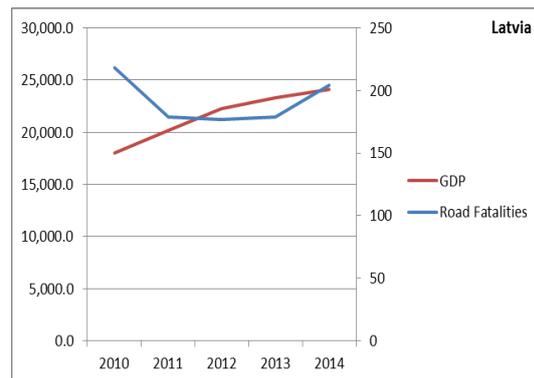
Ireland: GDP increase; Road fatalities decrease, then increase



Estonia: GDP increase; Road fatalities increase, then decrease



Latvia: GDP increase; Road fatalities decrease, then increase

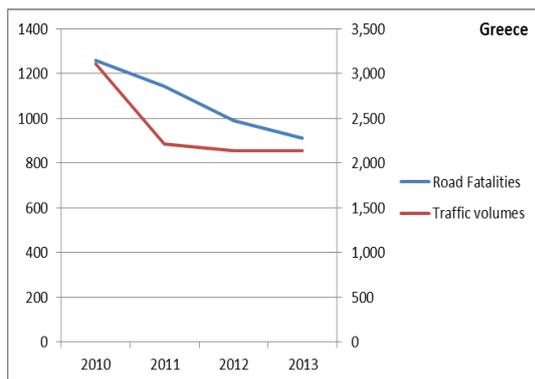


3. ANNEX: ROAD FATALITY DEVELOPMENT AND THE CHANGE IN ANNUAL ROAD FREIGHT (VEHICLE KILOMETRES) 2010-2013²⁵⁷

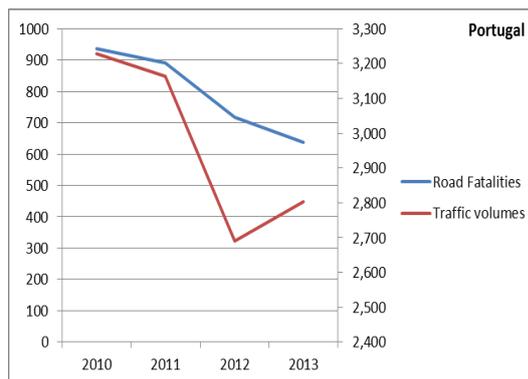
1. Patterns among the five EU Member States with highest reduction of road fatalities 2010-2013

Road fatalities decrease both in the countries where traffic flows are mostly decreasing and in the Member State countries with a traffic flow increase.

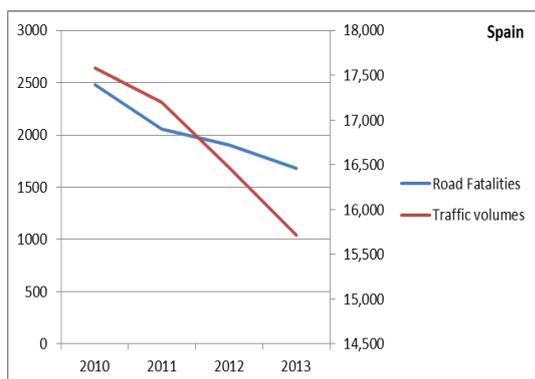
Greece: Traffic flow decrease; Road fatalities decrease



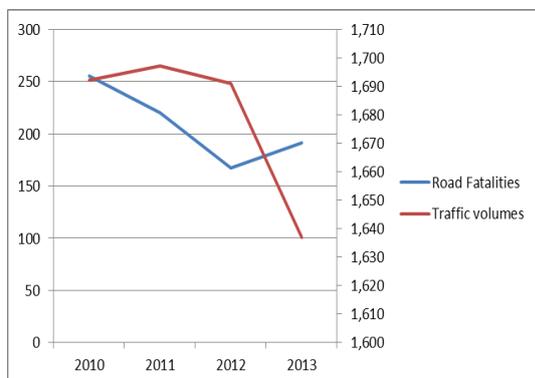
Portugal: Traffic flow decrease; Road fatalities decrease



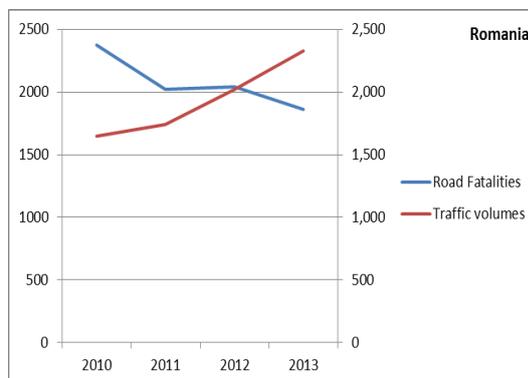
Spain: Traffic flow decrease; Road fatalities decrease



Denmark: Traffic flow decrease; Road fatalities decrease



Romania: Traffic flow decrease; Road fatalities decrease

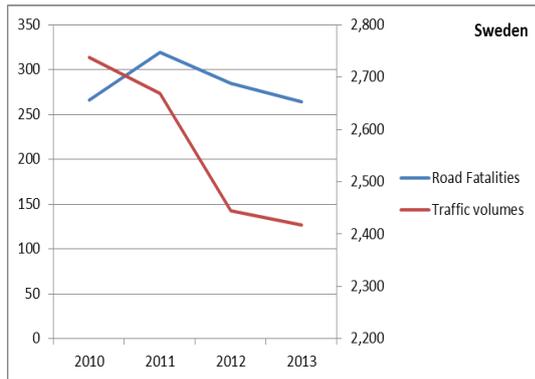


²⁵⁷ Traffic flow figures from Eurostat, road fatality numbers from the CARE database

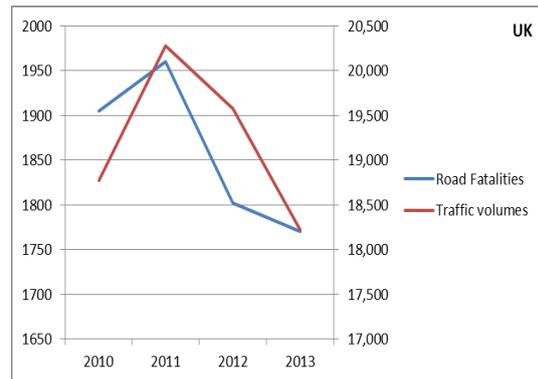
2. Patterns among the five EU Member States with lowest reduction of road fatalities 2010-2013.

Only in the UK does the change in traffic flows correlate with the change in road fatality numbers for all three years; in the other four cases the fatalities both decrease and increase in years with decreasing traffic flows.

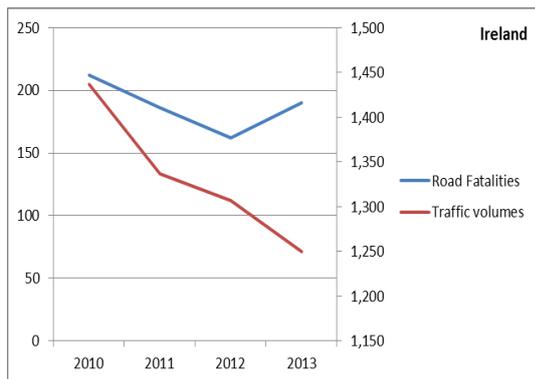
Sweden: Traffic flow decrease; Road fatalities decrease



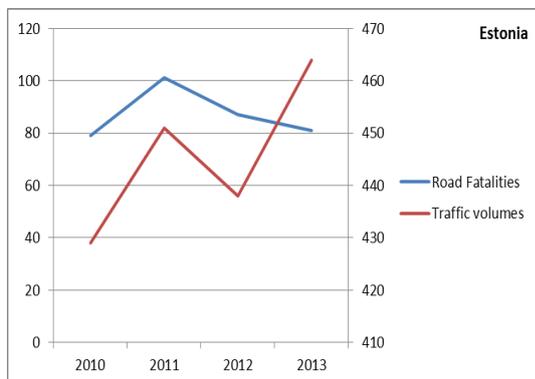
UK: Traffic flow decrease; Road fatalities decrease



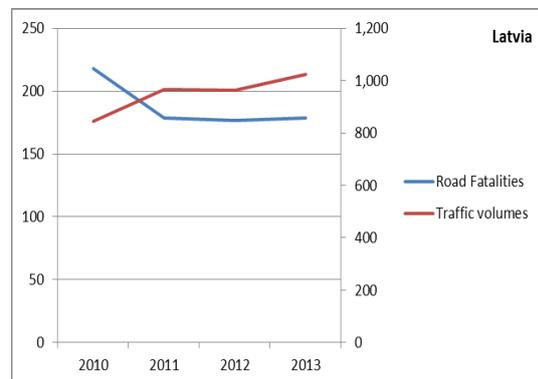
Ireland: Traffic flow decrease; Road fatalities decrease



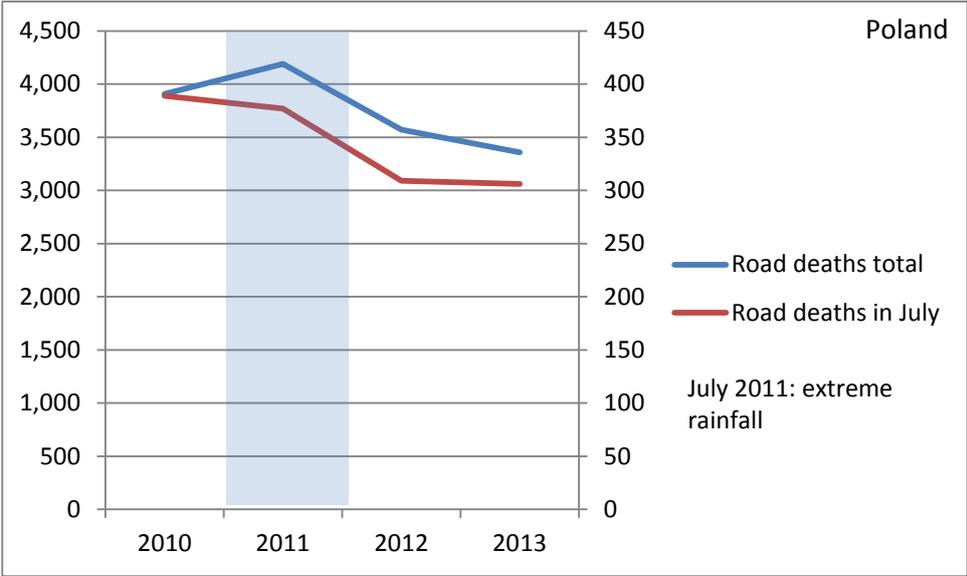
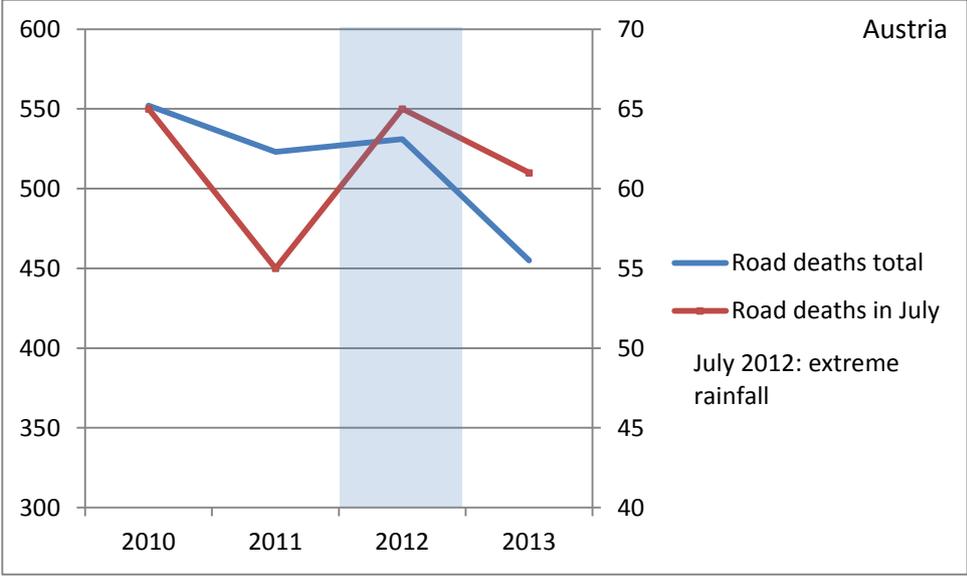
Estonia: Traffic flow decrease; Road fatalities decrease



Latvia: Traffic flow decrease; Road fatalities decrease



4. ANNEX: ROAD FATALITY DEVELOPMENT AND TWO CASES OF EXTREME PRECIPITATION, 2010-2013²⁵⁸



²⁵⁸ Weather data from the Royal Netherlands Meteorological Institute, *European Climate Assessment Dataset*; road fatality numbers from the CARE database

5. ANNEX: SUMMARY OF THE TECHNICAL STUDY RECOMMENDATIONS

INSTITUTIONAL FRAMEWORK
The strategy period coincides with particularly uncertain and uneven economic developments across EU 28 which inhibits meaningful predictions about the level of future fatal outcomes in road traffic crashes. A strong influence on trends in road deaths is being exerted by external factors and a significant slowing of annual progress below that needed to reach the 2020 target can be expected in the event of stronger economic development, sustained lower fuel prices and a less than urgent approach to new, appropriately targeted intervention at EU and national levels. These challenges, together with the preparation needed for post 2020 actions towards the 2050 goal require some strengthening of institutional delivery at EU level to ensure that every opportunity is explored to implement affordable, effective activity.
Results Focus
A sharp focus is needed to address road fatality reduction goals to ensure that interventions to improve road safety appropriately address these goals and targets.
The casualty groups which determine future priorities to reduce targeted numbers of road deaths in EU countries are car occupants and powered two-wheeler users (non built-up areas) and pedestrians (built-up areas).
The casualty groups which determine future priorities for reductions in the risk of road death (number of deaths per 100,000 of population) groups in EU countries are young novice drivers, powered two-wheeler users (non-built up areas) and pedestrians and cyclists (built-up areas).
In most EU countries, road traffic injury is the 1 st or 2 nd cause of death for school age children and young people (5-24 age groups), and amongst the first three leading causes for 5-49 age groups (2010). An increasingly ageing society and the physical vulnerability of older road users also need more attention.
The current focus on preventing and reducing the number of deaths via 2020 and 2050 targets now needs to be expanded to include serious injury. New focus on serious injury is warranted given its prevalence, the slower improvement achieved for serious injury as opposed to fatal injury and the opportunities presented by new reporting for MAIS ≥ 3 serious injury expected in 2015. The main life-threatening injuries to be addressed are head and spinal injuries. The proposal for a 35% reduction in serious injuries by 2020 compared with 2014 seems an appropriate and challenging strategic target.
It is suggested that the framework for the future development of Policy Orientations is provided by the evolving Road Injuries Strategy addressing both fatal and serious injuries. Consistent with good practice road safety management, future road safety strategy needs to establish a clear road safety performance framework with specific objectives to allow targeting and monitoring and evaluation
The identified crash types which need to be addressed are head-on crashes, run-off-road crashes, intersection crashes and pedestrian and other vulnerable road user crashes.
The key factors causally related to the risk and number of fatal (and serious) injuries are levels of speeding, drinking and driving, non-use of protective equipment, the safety quality of vehicles and roads, and emergency medical response.
Consideration should be given to setting targets to 2020 to increase seat belt use and crash helmet use; reduce average speeds and speeding over the limit; reduce levels and drinking and driving and fatal injury outcomes; improving the safety quality of the new vehicle fleet through use of Euro NCAP star ratings or for the road infrastructure (at least for TEN-T) using road assessment programme ratings Euro RAP.
The scope of Policy Orientations might be extended to include activity towards reducing work-related road deaths and serious injuries.
A road safety management capacity review is recommended to assist the development of a post-2020 Towards Zero strategy, involving key Commission Directorates and road safety partners who can deliver road safety results.
In view of the challenges to 2020 and beyond, road safety lead unit capacity needs strengthening in DG MOVE, particularly in the further development of its road safety strategy and coordination,

monitoring and evaluation functions, as well as in technical support for Safe System intervention.
Coordination
Some further expansion of inter-Directorate coordination is recommended to ensure multi-sectoral, day-to-day ownership of road safety goals, targets and strategy. It is recommended that DG MOVE creates at least one full-time staff position dedicated to coordinating the future development and implementation of Policy Orientations and post-2020 strategy.
DG MOVE should consider setting up and chairing a Policy Orientations Steering Group (and subsequently a Towards Zero group) bringing together all Directorates with day-to-day responsibilities relating to road safety, including reporting to Directors.
It is recommended that the Commission builds on this cooperation with the High Level Group towards further annual reporting of important road safety outcomes to allow closer monitoring and management of road safety strategy.
Legislation
Large scope exists for further legislation to address the road safety task to 2020, particularly within the framework of the General Safety Regulation, driver licensing and TEN-T initiatives. Suggestions for future priority initiatives have been outlined in previous sections.
Guidance of impact assessments of road safety legislation needs to include common protocols for assessing costs and benefits and the use of updated annual values for the prevention of a fatality (See next section).
Funding and Resource Allocation
Despite the increasingly ambitious goals and targets sought, identified risks and demonstrated benefit to cost ratios of publicly acceptable measures, investment in preventing serious health loss in road crashes is not commensurate with the high socio-economic value of its prevention either at EU or national levels.
It is recommended that Commission Directorates adopt the standard methodology for assessing the costs and benefits of road safety measures as presented in the updated handbook for the evaluation of external costs (2014), updated to reflect annual values for the prevention of a fatality.
Determining priorities for resource allocation and harmonisation should not always rely upon cost-benefit analysis, since measures which provide the largest number of road deaths and serious injuries many have a lower BCR than measures with higher BCRs which address a smaller number of casualties.
Promotion
Promote the Safe System goal and approach as the new safety culture, interim targets and the shared responsibility for reaching them in all communication activities including the European Road Safety Charter.
Monitoring and Evaluation
While information on traffic volume by road user type in several Member States is collected, traffic volume data is not available for EU 28. Traffic volume is an essential exposure indicator and this important data deficit needs to be addressed urgently by Member States, DG MOVE and Eurostat.
Extension of the current EU road safety performance framework is recommended and suggestions are made for a range of indicators for adoption to 2020 and beyond.
Annual reporting on EU road safety performance could be undertaken within the High Level Group on Road Safety and CARE expert groups.
The European Road Safety Observatory is a valuable source of road safety information. Country profiles and other statistical information need to be updated annually. .
The development of an EU-wide in-depth crash injury investigation system is recommended
The European Road Safety Charter should be reviewed regularly to encourage high quality road safety contributions.
Research and Development and Knowledge Transfer
The EU plays a crucial role in research and development which has underpinned much of the successful life-saving intervention and tools implemented at EU level and in Member States. New

focus is needed on Safe System intervention and 2050 goals
The knowledge transfer role is also vital and there is large scope for EU best practice guidance has emerged in the last 10 years.
As recommended previously, the funding of Safe System demonstration projects in corridors, cities and areas is needed to accelerate knowledge transfer and to encourage roll out and inclusion of Safe System into the mainstream of road safety activity in EU 28.
The European Road Safety Observatory is a valuable tool for policymakers and professional and web texts and other information should be regularly updated.
INTERVENTIONS
New, effective action is needed by the EU and Member States between now and 2020 towards achieving existing targets. In terms of meeting the 2020 target and encouraged by the EU institutions, national priorities should focus on making further progress in securing compliance with the key road safety rules. More or less immediate results can be achieved in the short-term through combined publicity and policy enforcement, particularly to address speeding. Suggestions are made here for priority EU intervention to 2020 and beyond for a wide range intervention in support of a Safe System approach to road safety.
Planning, design, operation of road network
Encourage knowledge transfer and the adoption of the Safe System approach to road safety engineering on TEN-T and the secondary network.
Establish a safety performance framework for the TEN-T network, require measurement of safety indicators e.g. Euro RAP ratings and mean speed levels.
Targets a percentage increase in Euro RAP star rating of TEN-T roads to 2020 and beyond.
Update TEN-T guidelines to ensure that all EU-funded infrastructure conforms to EC Directives 2004/54/EC and 2008/96.
Set a maximum speed limit or lower of 120 km/h on TEN-T roads.
Promote and fund Safe Corridor and Safe City/Safe Town projects on the TEN-T and secondary network comprising road safety engineering and multi-sectoral intervention to intervention to achieve results and develop road safety management capacity.
Enforcement of key road safety rules
Set up/support annual surveys of levels of compliance with speed limits, excess alcohol legislation and levels of front and rear seat belt use and report on findings.
Set targets to 2020 at EU and national levels for improved compliance with speed limits, excess alcohol limits and seat belt use legislation and request annual reporting by the High Level Group on Road Safety and CARE.
Provide new guidance on best practice enforcement of key road safety rules.
Promote and fund enforcement activity and other intervention in Safe Corridor and Safe City/Safe Town projects on the TEN-T and secondary network.
Mandate EU fitment of speed assistance systems and seat belt reminders in all seating positions in all motor vehicles at the earliest opportunity and take a variety of actions in the short-term to encourage the fitment and use of alcolocks e.g. in cross-border enforcement and in best practice guidance on their use in alcohol user rehabilitation.
Vehicle and equipment safety standards
Ensure that EU vehicle safety standards need to provide a high level of protection.
Propose a range of new EU vehicle safety legislation to reduce the number and risk of serious and fatal injury including the following priorities: Autonomous Emergency Braking Systems (AEBS) in cars, Speed Assist (advisory and voluntary systems); seat belt reminders for front and rear seat passengers; fitment of adaptive restraints in cars, protection of far-side car occupants in side impacts; improved heavy goods vehicle front end design to protect other users, rear underrun protection and side underrun protection; and lane keeping assist.
Promote and fund a Euro SHARP consumer information programme on powered two- wheeler use crash helmets in cooperation with the UK SHARP programme.
Monitor the usage levels of helmets by powered two wheeler riders and cyclists across the EU and

promote/propose mandatory cycle helmet use legislation for school-aged children across the EU and target increased levels of use; establish a European cycle helmet consumer information programme.
Promote zero-rated Value Added Tax for cyclist and motorcyclist helmets.
Revise EC Directive 2014/24/EU on public procurement to include road safety, alongside existing provisions covering environmental and social aspects.
Invite the High Level Group on Road Safety to consider national incentives to fast-track proven technologies via procurement, safe travel policies, and tax and insurance incentives.
Through the EU Health and Safety at Work agency, devise safe travel policies for the European Commission as well as promoting take up of ISO 39001 on road safety management systems for organisations.
Driver and rider standards
Review Directive 2006/126/EC towards the introduction of a package of effective Graduated Driver Licensing measures for car drivers and powered two-wheeler riders.
Review Directive 2003/59/EC with a view to introducing new provisions/guidance on demonstrably effective training schemes for professional drivers.
Post-impact care
Commission a study to review the scope of post impact care in reducing deaths and serious injuries in road collisions.
Include first responder training in commercial and public transport driver training and emergency services personnel.
Monitor and rank annually through EU databases the role of road traffic injury as cause of death and disability compared with other mortality and morbidity.

6. ANNEX: REPORT FROM THE STAKEHOLDER WORKSHOP 17 NOVEMBER 2014

MEETING REPORT

Workshop in preparation of the interim evaluation of the Policy orientations on road safety 2011-2020

Brussels, 17 November 2014

1. Introduction

This stakeholder workshop was organised in preparation of the interim evaluation of the *Policy orientations on road safety 2011-2020*. The aim was to gather inputs and to get stakeholder opinions on a few questions linked to the evaluation.

Szabolcs Schmidt, Head of Unit, DG MOVE Road Safety Unit, introduced the topic and presented the planned process of an interim evaluation. A technical support study will be done by external road safety expert Ms Jeanne Breen. This study and the outcomes of the stakeholder workshop will inform the Commission interim evaluation which is expected to be ready by second quarter of 2015. The final report will be published on the Commission website for transparency.

2. First discussion: looking back

The first part of the workshop discussed the opinions and views of stakeholders on the road safety impact of the Commission in the first part of the strategy period: Did they consider the concept helpful to bring the EU as a whole forward and were the tools appropriate and the decisions made on the right level to be most efficient?

Participants were overall very positive and the consensus among those who took the floor was that the Commission had indeed been successful and added value; the same results would not have been achieved with only national level initiatives. It was stressed that the EU target had been important in encouraging and boosting national initiatives.

Best-practice sharing and creating platforms for experts; product safety directives and type approval; technical harmonisation and standards and the cross-border enforcement directive were mentioned as strong points, helping Member States, citizens and companies. The importance of EU boosting national efforts or international platforms was noted.

Looking back, some participants would have preferred a fully-fledged action plan instead of the strategic policy framework provided in the *Policy orientations*.

The road safety improvement since 2011 was described as stronger for car drivers and passengers whereas several participants noted that the performance for vulnerable road users including motorcycle riders was more disappointing. Increases in cycling in some Member States had also presented safety challenges.

A key factor noted for road traffic crashes was road user behaviour: especially the responsibility of drivers of motorised vehicles.

Several participants stressed the shared responsibility between different DGs and the difficulties for them to lobby both on DG MOVE and DG ENTR²⁵⁹ for vehicle safety issues,

²⁵⁹ Now DG GROW

for example. It was suggested that the Commission has not yet explored the full potential of horizontal synergies and links between different policy areas.

3. Second discussion: looking forwards

The second part of the workshop was future-oriented, asking for inputs on whether the Commission might need to adjust its priorities, targets or set of measures to improve the chances of reaching the 2020 target.

The focus of participants was on the one hand on the road user perspective: asking for strengthened focus on life-long education and training, including possibly first-aid training, plus enforcement of rules; on the other hand on technical developments such as infrastructure improvement, ITS, active safety, distraction issues, emergency care issues etc.

Speed was proposed as a priority issue to be dealt with, as was drink-driving, drug-driving, seat belt use and driver telephone use. Speed was especially discussed with regard to urban areas and low-speed zones where meeting participants suggested that more enforcement was needed to improve respect of speed limits; Intelligent Speed Adaptation systems could also be of help in those areas.

For technical issues, both setting of standards and raising standards was requested. Some organisations preferred that Member States incentivise the introduction of vehicle safety technologies in a non-binding way. Design of trucks (both passive and active) was discussed as an area with further potential, complementing the work on active safety technologies and road user behaviours. Extending safety rules to the back seat – e.g. seat belt reminders – was another proposal. Fast-tracking the introduction of new safety technologies through procurement was mentioned.

It was noted that several EU measures introduced in the previous decade would have an impact on 2010-2020 outcomes, whereas measures introduced since 2011 might take a while to reveal their impact.

A framework taking into account the ageing society, urbanisation, the need for green modal shift including specific actions for safer cycling, and the roll-out of new technology for safety was requested.

The large potential to integrate road safety into urban mobility plans was highlighted. Scoreboarding and monitoring of results, not least in connection with urban mobility and sustainable urban mobility plans, was encouraged.

As a working method, the evidence-based approach was called for and more analysis of factors contributing to road crashes and their outcomes. Future demographics also posed new challenges.

An additional target on serious injuries was strongly supported and encouraged by many stakeholders. Some participants proposed a target level of 35% from now to 2020 which they believed to be challenging and achievable. The setting of a serious injury target was called "an important milestone for the years to come". Other participants stressed the additional need for careful research and analysis in order to empirically identify truly effective countermeasures. It was discussed whether an empirically derived target (as opposed to a strategic target) was at all possible at the moment.

4. Conclusions and final words

The Commission thanked all participants and noted the broad support and scope for EU-wide inputs and the continuing need to provide added value over and above what could be achieved by Member States. The Commission noted that there had been useful

discussion of EU targets, the need to improve vulnerable road user safety, the scope for product safety standards and legislative activity, education and enforcement initiatives and knowledge transfer on best practice.

Participants were invited to submit fact-reports, data and additional analysis they have and they were given the opportunity to submit written contributions with more detailed answers to the questions in the discussion paper before the deadline of 28 November 2014.

Written contributions to the stakeholder consultations - summary of inputs

15 stakeholders submitted written contributions in connection to the workshop held on 17 November 2014. Of these, five came from Member States and ten came from organisations, industry and road user groups with an interest in road safety.

The respondents replied to eight specific questions.

1. Do you believe that EU level initiatives have contributed to the decreased number of road fatalities during the last couple of years? In what areas do you consider EU actions for road safety to have been most efficient and successful?

The answers received were all positive, with the one exception of the Federation of European Motorcyclist Associations (FEMA) who replied that for motorcyclists, EU initiatives have not contributed to a notable decrease. All other stakeholders confirmed their belief that EU initiatives have contributed to road safety improvements

"It is clear that EU initiatives have positively contributed to the decreased number of road fatalities during the last couple of years."

ASECAP

It was noted that the EU road safety initiatives were of course not the only explanatory factor to the reduced number of road deaths.

2. Do you see any unintended positive or negative effects produced by Commission road safety initiatives – if so, what?

Most respondents did not identify any unintended effects.

Some positive side-effects mentioned were: synergies and added value thanks to the interaction between Member States; a more uniform approach to road safety matters and increased interest in road safety discussions among national stakeholders.

Some negative side-effects mentioned were: the "legislation fatigue" among Member States and a negative effect on road safety for motorcyclists caused by the third driving licence directive shifting focus from training to testing of motorcycle riders.

"Too much legislation creates resistance in the participating countries."

ECTRI

3. Do you believe the same results could have been achieved easier or at a lower cost in other ways (e.g. by soft measures instead of legislation or vice-versa)?

Those who replied to this question all agreed that the same results could not have been achieved with only soft measures instead of legislation; with the exception of Austria who stressed that it is difficult to be certain of the effects of any single initiative and therefore impossible to estimate the cost-benefit ratio of soft measures compared to legislative measures.

4. Do you believe the same results could have been achieved by Member States at national and/or regional level without the EU interventions?

Finland and Germany assumed the same results could perhaps have been achieved also by national level initiatives. The European Conference of Transport Research Institutes (ECTRI) makes the distinction between the best

"The EC has credibility and authority that supports the implementation of initiatives at national level."

Road Safety Authority,
Ireland

road safety performers, achieving their results before EU legislation, and Member States with poor road safety performance where EU initiatives made a great impact.

Other respondents did not believe that the overall results would have been achieved with work only on the national level.

5. Do you believe the same or better results could have been achieved by an alternative organisational set-up at EU level (e.g. a separate road safety agency)?

The majority of respondents did not believe another set-up could have produced better results. Some stakeholders emphasised that the influence of an agency would not be as big as that of the Commission. Other stakeholders instead said a separate road agency might be a good idea for knowledge transfers, bringing stakeholders together and improved harmonisation of standards.

Stakeholders also proposed that better results could be achieved with better cooperation and closer collaboration among Commission units and Directorate-Generals.

6. Do you consider the strategic target on 50% reduction of road deaths to still be relevant and realistic with regard to the size and characteristics of road safety problems in the EU today?

All stakeholders stressed that the strategic target was relevant and important. Some had doubts that it was realistic, especially with regard to motorcyclists.

"The EU target remains crucial, as is action to achieve it."

ETSC

Several of the respondents also mentioned the need for an additional target on seriously injured.

7. Do you consider the seven strategic objectives of the Policy orientations on road safety still relevant in relation to the current main road safety problems and challenges – should anything be deleted or added to this list?

All respondents considered the seven objectives of the Policy orientations to be still relevant, with a reservation by FEMA regarding the details of some of the existing objectives.

Stakeholders proposed that additions could be made to the policy framework to include objectives linked to: the ageing society, new vehicle types such as e-bikes; work-related road safety; safety equipment and traffic safety management systems. Several stakeholders mentioned the need to put more emphasis on the safety of vulnerable road users and on training, education and enforcement to better address road user behaviours.

8. Would you propose any additional, realistic measures at EU level (respecting the subsidiarity and proportionality principles and within EU competence) that could address the current/future problems and challenges of road safety in order to contribute to the 2020 strategic target?

For improved road user safety, many stakeholders stressed the need for better road user training – high quality and cost effective training. This was proposed to be combined with stepped-up efforts on enforcement. Several stakeholders mentioned the specific challenge of distracted road users.

For infrastructure safety, FEMA voiced disappointment with the lack of progress on safer guardrails for motorcycles. Harmonised speed limits on motorways and in urban areas were also proposed.

"The huge amount of unsafe guardrails still in place throughout the EU makes clear the case for EU-wide legislation."

FEMA

For safer vehicles, the Verband der TÜV shared a number of proposals for strengthened roadworthiness testing in the EU. Extending legislation for mandatory seat belt reminders was mentioned.

The ITS area was emphasised by several stakeholders. Requests included: funding for road safety technology research; legislative measures to ensure market penetration of technologies with proven road safety effect (i.e. Automatic Emergency Braking); extended focus to ITS also for motorcycles; and making cooperative technologies an EU priority.

Several stakeholders stressed the need to move forwards on the serious injury initiative. Austria also proposed looking into best practices for traffic rules in the event of an emergency or a car breakdown on motorways.

In addition, some general remarks were received. The evidence-based approach with cost-benefit analyses was supported. One stakeholder remarked that EU legislative processes are today too slow and the impact of legislation comes too late. Another stakeholder requested the Commission to prepare common calculation principles for cost of traffic deaths and serious injuries.

List of participants in the stakeholder workshop, 17 November 2014

NAME	FIRST NAME	ORGANISATION
Aarse	Rob	Transport en Logistiek Nederland
Adminaite	Dovile	ETSC
Avenoso	Antonio	ETSC
Basset	Ludovic	ACEM
Bramans	Girts	Permanent representation of Latvia
Breen	Jeanne	Jeanne Breen Consulting
Burns	Velma	Irish Road Safety Authority
Cobbaut	Johan	CITA
Cré	Ivo	POLIS
Delhaye	Aline	Federation of European Motorcyclists Associations
Diez	José	European Union Road Federation
Ellul	Glen	Malta Transport Centre
Fernández	Eduard	CITA
Goebelt	Richard	TÜV
Ishikiryama	Yusuke	CLEPA
Iwatani	Satoru	CLEPA
Jost	Graziella	ETSC
Kato	Masaya	Toyota Boshoku Europe N.V.
Kennedy	Alan	Nissan Technical Centre Europe
Kuester	Fabian	European Cyclists' Federation
Lacroix	Jacqueline	Deutscher Verkehrssicherheitsrat (DVR)
Lenz	Olivier	Fédération Internationale de l'Automobile
López Leza	Luisa	MOVING
Maître	Isabelle	Fédération Nationale des Transports Routiers
Markmanrud	Martin	Nordic Logistics Association
Martinez Sans	Fuensanta	ACEA
Mersch	Jeannot	Federation of European Road Victims
Mousel	Thierry Henri	CLEPA
Peeters	Roger	Laser Europe
Pető	Gábor	Permanent Representation of Hungary to the EU
Purdie	Ruth	TISPOL
Radetzky	Robert	Austrian Ministry for Transport, Innovation and Technology
Regenberg	Lynn	Bosch
Rewell	Simon	Insure The Box Limited
Rubika	Iveta	Permanent representation of Latvia
Saile	Dirk	Bundesverband Güterkraftverkehr Logistik und Entsorgung
Schulze	Horst	FERSI
Shovelton	Elizabeth	Department for Transport, UK
Sica	Augusta	International Commission for Driver Testing (CIECA)
Soenen	Jan	Transport en Logistiek Vlaanderen
Stacey	Stephen	EuroRAP

Thiant	Alois	Insurance Europe
Todts	William	Transport & Environment
Townsend	Ellen	ETSC
Trottein	Robert	Laser Europe
Van Mele	Julie	IRU
Vansnick	Mark	Belgian Ministry of Transport and Mobility
Willigers	Dolf	FEMA
Zakrzewska	Aleksandra	Bundesministerium für Verkehr und digitale Infrastruktur
Schmidt	Szabolcs	European Commission
Sanz Villegas	Mayté	European Commission
Schäfer	Annette	European Commission
Lindahl	Susanne	European Commission
Amrhar	Tarik	European Commission

7. ANNEX: NATIONAL TARGETS ON SERIOUS ROAD TRAFFIC INJURIES²⁶⁰

Member state	Target level	Target period	Required percentage decrease from one year to next
Austria	40%	2010-2020	5.0%
Belgium	-	-	-
Bulgaria	20%	2010-2020	2.2%
Croatia	-	-	-
Cyprus	50%	2010-2020	6.7%
Czech Republic	40%	2010-2020	5.0%
Denmark	50%	2013-2020	9.4%
Estonia	Average for 2013-2015 to be 25% less than average for 2008-2010	2010-2015	5.5%
Finland	25%	2010-2020	2.8%
France	-	-	-
Germany	-	-	-
Greece	-	-	-
Hungary	-	-	-
Ireland	30%	2013-2020	5.0%
Italy	-	-	-
Latvia	-	-	-
Lithuania	-	-	-
Luxembourg	-	-	-
Malta	-	-	-
Netherlands	25%	2007-2020	2.2%
Poland	40%	2010-2020	5.0%
Portugal	-	-	-
Romania	-	-	-
Slovakia	-	-	-
Slovenia	-	-	-
Spain	-	-	-
Sweden	25%	2007-2020	2.2%
UK	-	-	-

²⁶⁰ Based on National Road Safety Strategies and similar documents as sent from Member States to the Commission in 2013-2014

