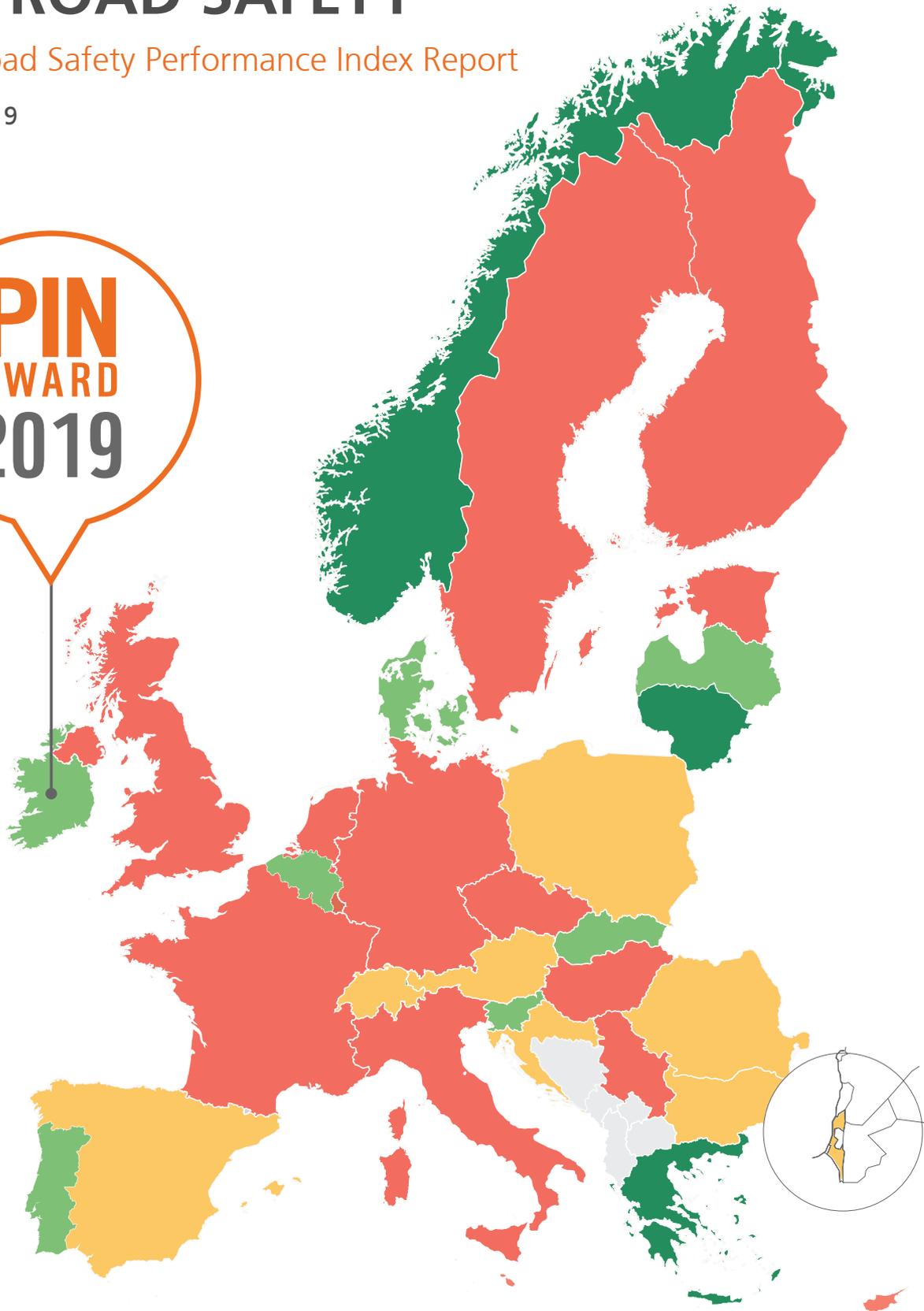


RANKING EU PROGRESS ON ROAD SAFETY

13th Road Safety Performance Index Report

June 2019



European Transport Safety Council

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| Croatia (HR) | Sanja Veić, Ministry of Interior |
| Czech Republic (CZ) | Jiří Ambros, Jindřich Frič, Transport Research Centre (CDV) |
| Cyprus (CY) | George Morfakis, Road Safety Expert, Aristotelis Savva, Ministry of Transport, Communications and Works |
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| Switzerland (CH) | Yvonne Achermann, Swiss Council for Accident Prevention (bfu) |
| U.K. (GB) | Delphine Robineau, Department for Transport Bell Mark, Transport Research Laboratory (TRL) |

PIN Observers

Stelios Efstathiadis, Road Safety Institute Panos Mylonas, Greece
Lucia Pennisi, Automobile Club d'Italia (ACI), Italy

PIN Steering Group

Henk Stipdonk, Netherlands Institute for Transport Analysis (KiM) (PIN Co-chair)
Heather Ward, University College London (UCL), Parliamentary Advisory Council for Transport Safety (PACTS) (PIN Co-chair)
Richard Allsop, ETSC Board of Directors (PIN Advisor)
Letty Aarts, Institute for Road Safety Research (SWOV)
Lars Ekman, Swedish Transport Administration
Jacqueline Lacroix, the German Road Safety Council (DVR)
Astrid Linder, Swedish National Road and Transport Research Institute (VTI)
Wiebke Matysik, Toyota Motor Europe
Guro Ranes, Norwegian Public Roads Administration
Maria Teresa Sanz-Villegas, European Commission
Pete Thomas, Loughborough University
Bettina Velten, Draeger Foundation
George Yannis, Technical University of Athens
Antonio Avenoso, ETSC
Graziella Jost, ETSC
Dovilé Adminaité-Fodor, ETSC
Caroline Heilpern, ETSC

For more information

European Transport Safety Council
20 Avenue des Celtes
B-1040 Brussels
Tel: +32 2 230 4106
dovile.adminaite@etsc.eu
www.etsc.eu/pin

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13th Road safety performance index report

Authors

Dovilé Adminaité-Fodor
Caroline Heilpern
Graziella Jost

PIN co-chairs

Henk Stipdonk
Heather Ward

Programme advisor

Richard Allsop

June 2019

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ABOUT THE EUROPEAN TRANSPORT SAFETY COUNCIL (ETSC)

ETSC is a Brussels-based, independent non-profit organisation dedicated to reducing the numbers of deaths and injuries in transport in Europe. Founded in 1993, ETSC provides an impartial source of expert advice on transport safety matters to the European Commission, the European Parliament, and Member States. It maintains its independence through funding from a variety of sources including membership subscriptions, the European Commission, and public and private sector support.

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FOREWORD

Antonio Avenoso,
ETSC Executive Director



In the next few months, newly-elected MEPs will take up their posts at the European Parliament and new European Commissioners will be appointed, together with the Presidents of the three main EU institutions.

They will have a long to-do list: agreeing on the next EU budget, tackling climate change, boosting growth and negotiating Brexit. They will also take on the responsibility for improving transport safety, a role that the EU was formally assigned in the Maastricht treaty back in 1992.

Have the EU and its Member States delivered? Zoom out and look at the last quarter century and the answer is a resounding yes. In 1993 (the year ETSC was founded), 65,000 people died on EU roads. That figure has been reduced by around 60%.

What about over the last five years, the mandate of the outgoing Commission and Parliament? The figures don't tell a positive story. If the EU was to meet its self-imposed 2020 target to halve road deaths, annual reductions of 6.7% were needed. Over the last four years, the total reduction was just four percent – effectively stagnation. The economic recovery, and consequent increase in road transport usage

partly explains the lack of progress. As do cuts to transport police numbers and infrastructure maintenance budgets by Member States as road safety fell down the political priority list in some countries.

But the EU must also shoulder some of the responsibility for waiting almost until the end of its five-year political cycle to deliver its biggest and boldest road safety initiatives: an update to minimum vehicle safety standards and a significant increase in the scope of infrastructure safety management rules.

These eventually came, in May last year, with final political agreements reached in the last few months of this year. Make no mistake, this was a massive achievement, which will save thousands of lives; but it will be several years before we see the full impact.

In the meantime, road deaths and injuries in the EU are still unacceptably high by any measure. As I write, the world's fleet of Boeing 737 Max planes are rightly grounded due to safety concerns following two appalling crashes that may have been avoidable. But the number of people who die on EU roads every week is equivalent to three Boeing 737s going down and killing everyone on board. Three planes, every week. Unimaginable for aviation is the everyday on our roads. This has to stop.

Over the next five years, the EU and its Member States need to up their game. We know how to do this. If every country in the EU had the same level of road mortality as Ireland (the winner of this year's PIN award), we would cut deaths by 40%, which equates to preventing 9700 road deaths in the EU as a whole annually.

Why do so many politicians refuse to make road safety a priority? Maybe because there are no silver bullets, progress is piecemeal and the right approach requires coordination, motivation and

“The next Commission and MEPs, working together with Member States, need to get back to basics, tackling the main killers which are still speeding, drink and drug driving, distraction and the failure to wear a seatbelt. We need action now, not at the end of another five years term.”

financing across many stakeholders? In short, the problems are relatively simple to diagnose (cut speeding, prevent drink and drug driving, achieve 100% seat belt and helmet use, tackle distraction) but implementation of the right policies to address them can be complicated and take time.

Ireland is an example of a country that is putting in place the right institutions, the right policies and the right follow-up. Let's be frank: it is often thankless political work that can be unpopular to implement. Ireland's recent changes to penalties for drink driving are a case in point. But the appropriate measures, implemented properly save lives.

At the EU level, it is also politically challenging to make cutting road deaths a priority. Road safety initiatives have been pushed down the priority list time and again. Five years ago, the incoming Commission scrapped plans to introduce a new target for cutting serious road traffic injuries (a victim of the so-called “Better Regulation” initiative). Thanks to a campaign led by ETSC, the target was eventually announced as part of the new road safety strategy for 2030.

The proposals for revised vehicle and infrastructure safety directives were also postponed several times. The outgoing Commissioner Violeta Bulc was a staunch supporter of road safety throughout her tenure, and for that she deserves full credit. She had to fight long and hard to keep such measures on the political agenda.

Unfortunately, politicians sometimes search for easy answers to complex questions. Increasingly I am asked if automation will make road deaths a thing of the past. Well, maybe one day

autonomous vehicles will be independently certified as being better at driving than the best human drivers. That's certainly not the case today. There is evidence that some driver assistance systems sold as “automation” are creating new collisions. Right now the regulatory environment is not ready; and we are decades away from these potentially safer autonomous vehicles representing a large proportion of the fleet. We cannot afford to wait that long.

The next Commission and MEPs, working together with Member States, need to get back to basics, tackling the main killers which are still speeding, drink and drug driving, distraction and the failure to wear a seatbelt. We need action now, not at the end of another five year term.



25,047 people lost their lives on EU roads in 2018, representing a 1% reduction compared to 2017. The EU has collectively reduced the number of road deaths by just 4% over the last five years.

EXECUTIVE SUMMARY

In 2010, the European Union renewed its commitment to improve road safety by setting a target of reducing road deaths by 50% by 2020, compared to 2010 levels. This target followed an earlier target set in 2001 to halve the number of road deaths by 2010. A new target to halve road deaths and the first target to halve the number of serious road traffic injuries by 2030 compared to 2020 levels were announced by the European Commission on 17 May 2018.

25,047 people lost their lives on EU roads in 2018, representing a 1% reduction compared to 2017. The EU has collectively reduced the number of road deaths by just 4% over the last five years.

Out of the 32 countries monitored by the ETSC Road Safety Performance Index (PIN) programme, 16 reduced road deaths in 2018 (Fig.1). The best results were achieved by Slovakia with a 17% decrease, Israel with 13%, Slovenia with 12%, Lithuania with 11% and Bulgaria with 10%. Road deaths increased in ten countries, while progress stagnated in six.

There has been progress over a longer period, but not enough to meet the 2020 target. Since 2010, EU countries achieved an overall reduction in road deaths of 20.7%, which equals a 2.8% annual average reduction. A 6.7% year-to-year reduction was needed over the 2010-2020 period to reach the 2020 target through constant progress in annual percentage terms. This reduction was not achieved and the target is now effectively out of reach. The EU would need to reduce the number of road deaths by 20.6% in 2019 and 2020 to reach the target - a highly unlikely possibility.

Strong political will and urgent measures are needed in all EU Member States to narrow the gap between the desired and the actual EU progress. Increased traffic law enforcement and treatment of high risk sites are among the measures that can have an immediate positive road safety effect.

These years of stagnation also highlight the urgent need for strong action at EU level. In May 2018, the European Commission adopted

its EU Strategic Action Plan for Road Safety that includes a new target to halve road deaths by 2030 compared to 2020 levels, as well as, for the first time, a target to halve seriously injured over the same period of time.¹ The Strategic Action Plan outlines the main measures to be taken before the end of the current Commission's mandate ending in 2019, as well as the actions planned for the 2020-2030 period. The EC also committed to present an EU Road Safety Policy Framework for 2020-2030 by spring 2019 to further develop the proposals. Work is also ongoing on a definition of road safety performance indicators to allow for better, more comprehensive monitoring of progress.

The EU Strategic Action Plan was published as part of the third mobility package, which also includes new vehicle safety standards, updated rules on road infrastructure safety management and a strategy for automated driving.

The new General Safety Regulation comprises of a number of updated minimum safety requirements for new vehicles that will come into force starting in 2022.² The legislation mandates a range of new vehicle safety features such as Automated Emergency Braking (AEB) and overridable Intelligent Speed Assistance (ISA) as standard on all new vehicles sold on the EU market. New heavy goods vehicles will have to comply with direct vision requirements as of 2028. Passive safety is also improved by extending the crash test zone to include the windscreen between the A-pillars for better pedestrian and cyclist protection.

TRL, the UK transport research laboratory, estimated in a study for the European Commission that the package of proposed

¹ EC Communication Europe on the Move, Sustainable Mobility for Europe: safe, connected and clean, annex 1: Strategic Action Plan on Road Safety, <https://bit.ly/2xHG5w>

² TRL, Cost-effectiveness analysis of policy options for the mandatory implementation of different sets of vehicle safety measures, Review of the General Safety and Pedestrian Safety Regulations, <https://bit.ly/2IN9ltl>

vehicle safety measures could prevent around 25,000 deaths and 140,000 people seriously injured across all vehicle categories within 15 years.³

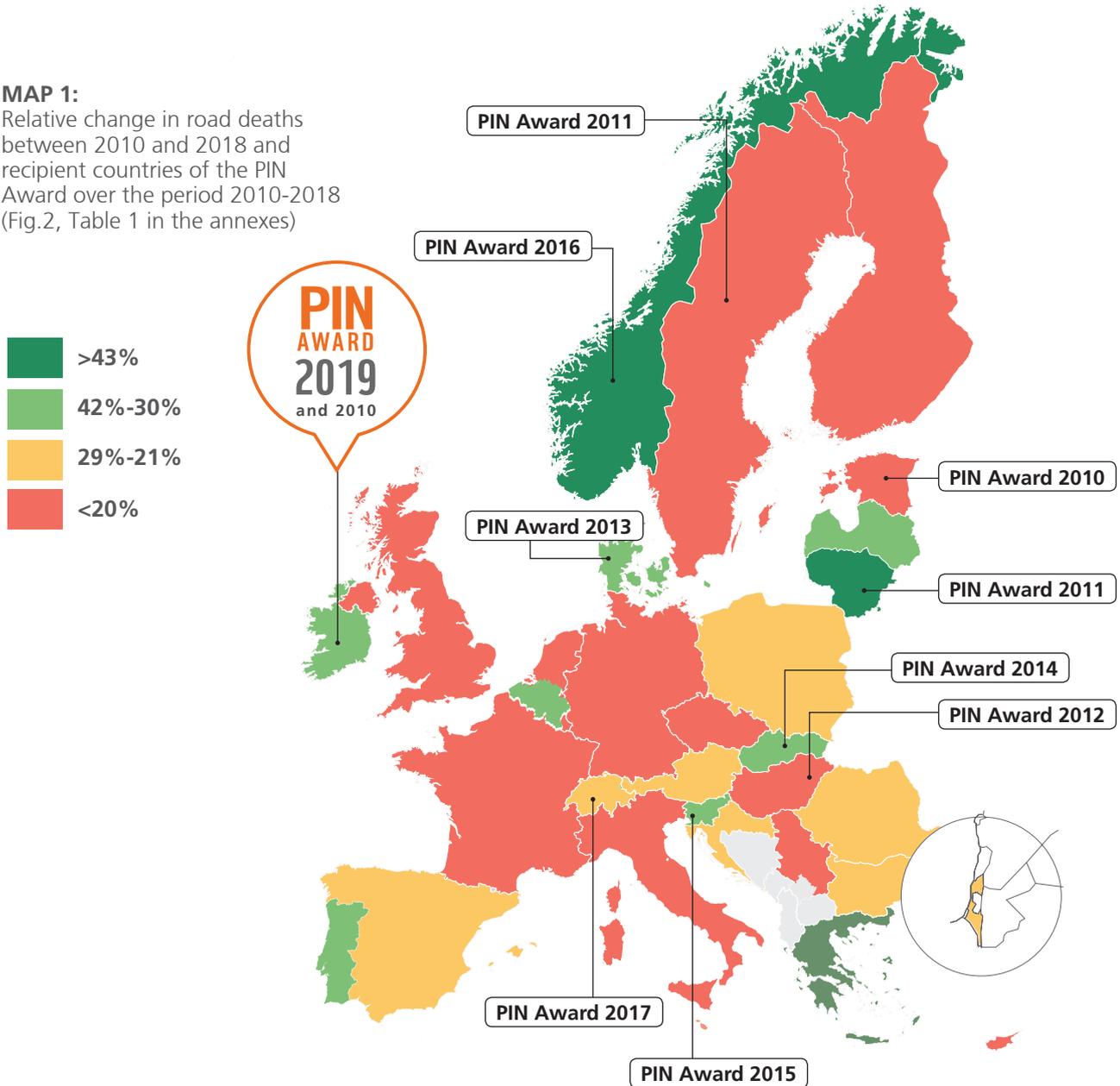
As of 2021, the new minimum infrastructure safety management procedures will have to be extended beyond the TEN-T network and will apply to all motorways, all “primary roads” and all non-urban roads that receive EU funding.⁴ The proposed measures were estimated to save

up to 3200 lives and prevent more than 20,000 serious injuries over the period 2020-2030.

Eleven PIN countries⁵ have also started preparing national road safety strategies for the upcoming decade. Individual countries’ efforts will be crucial for the implementation of the Safe System approach across the EU, and for achieving the 2030 targets.

MAP 1:

Relative change in road deaths between 2010 and 2018 and recipient countries of the PIN Award over the period 2010-2018 (Fig.2, Table 1 in the annexes)



³ Regulation (EU) 2019/... of the European Parliament and of the Council of on type-approval requirements for motor vehicles and their trailers, and systems, components and separate technical units intended for such vehicles, as regards their general safety and the protection of vehicle occupants and vulnerable road users, amending Regulation (EU) 2018/858 and repealing Regulations (EC) No 78/2009, (EC) No 79/2009 and (EC) No 661/2009, <https://bit.ly/2CRJWe6>

⁴ Directive of the European Parliament and of the Council amending Directive 2008/96/EC on road infrastructure safety management, <https://bit.ly/2X2Vx1W>

⁵ Austria 2021-2030, Bulgaria 2020-2030, Cyprus 2021-2030, Spain 2021-2030, Hungary, Ireland 2021-2030, Luxembourg 2019-2023, Lithuania 2019-2030, the Netherlands 2020-2030 (adopted), Poland 2020-2030 and Norway.

MAIN RECOMMENDATIONS TO MEMBER STATES

- Seek to accelerate the progress by all available means, including applying proven traffic law enforcement strategies according to the EC Recommendation on Enforcement.⁶
- Adopt and implement Safe System approach to road safety by addressing all elements of the road transport system in an integrated way, and adopting shared overall responsibility and accountability between system designers and road users.⁷
- Provide sufficient government funds to allow the target-oriented setting of measures and set up financing and incentive models for the regional and local level.
- Start preparing post-2020 road safety plans, including national targets for reducing serious injuries based on the MAIS3+ standard alongside the reduction of road deaths and quantitative sub-targets based on performance indicators.
- Use the evidence gathered to devise and update relevant policies. Make the choice of measures based on sound evaluation studies and - where applicable - cost effectiveness considerations, including serious injuries in the impact assessment of countermeasures.
- Conduct a thorough qualitative assessment of current road safety strategies to evaluate the levels of implementation and effectiveness of the foreseen road safety measures in reaching road safety targets.

MAIN RECOMMENDATIONS TO THE EUROPEAN COMMISSION

Deliver on the commitments stated in the 5th EU Strategic Action Plan:

- Finalise and start collecting with Member States a list of key performance indicators to monitor progress;
- Adopt a long-term operational plan for 2030, including investments in measures and a timetable and structure for delivering the two targets already endorsed;⁸
- Set the strategy within the context of changing mobility patterns including new trends such as automation, increased walking and cycling due to promotion of active travel and an ageing population.
- Support Member States in implementing the revised rules on road infrastructure safety management.⁹
- Deliver on the estimated number of deaths and seriously injured prevented by adopting strong secondary legislation implementing the General Safety Regulation.¹⁰

Within the context of the EU strategy on automated mobility:¹¹

- Develop a coherent and comprehensive EU regulatory framework for the safe deployment of automated vehicles.¹²
- Revise type approval standards to cover all the new safety functions of automated vehicles, to the extent that an automated vehicle will pass a comprehensive equivalent to a 'driving test'. This should take into account high risk scenarios for occupants and road users outside the vehicle.¹³

⁶ EC Recommendation on Enforcement in the Field of Road Safety 2004/345, <http://goo.gl/Vw0zhN>

⁷ ITF-OECD (2008), Towards Zero, Ambitious Road Safety Targets and Safe System Approach, <https://bit.ly/2Mvk1QL>

⁸ ETSC (2018), Briefing: 5th EU Road Safety Action Programme 2020-2030, <https://goo.gl/ZX33s1>

⁹ Proposal for a Directive of the European Parliament and of the Council amending Directive 2008/96/EC on road infrastructure safety management, <https://bit.ly/2X2Vx1W>

¹⁰ Regulation (EU) 2019/... of the European Parliament and of the Council on type-approval requirements for motor vehicles and their trailers, and systems, components and separate technical units intended for such vehicles, as regards their general safety and the protection of vehicle occupants and vulnerable road users, amending Regulation (EU) 2018/858 and repealing Regulations (EC) No 78/2009, (EC) No 79/2009 and (EC) No 661/2009, <https://bit.ly/2CRJWe6>

¹¹ European Commission (17.05.2018), Communication from the European Commission to the European Parliament, the Council, the European Economic and Social Committee, the Committee of the Regions On the road to automated mobility: An EU strategy for mobility of the future, <https://goo.gl/kdqY6V>

¹² ETSC (2016), Prioritising the Safety Potential of Automated Driving in Europe, <https://goo.gl/TojCUL>

¹³ Ibid

PART I

A FIFTH YEAR IN A ROW OF
SLOW PROGRESS –
THE EU ROAD SAFETY
TARGET FOR 2020 IS OUT
OF REACH



01

1.1 ONLY A 1% DECREASE IN THE NUMBER OF ROAD DEATHS IN THE EU IN 2018

Out of 32 countries monitored by the PIN programme, 16 registered a drop in road deaths in 2018, compared to 2017 (Fig.1).

Slovakia leads the ranking with a 17% reduction in the number of road deaths between 2017 and 2018. It is followed by Israel with a 13% decrease, Slovenia with 12%, Lithuania with 11% and Bulgaria with 10%.

The number of road deaths increased in ten countries, while progress stagnated in six.

The largest increase was registered in Luxembourg with 44%, Estonia with 40% and Sweden with 28%.¹⁴

The 2019 ETSC Road Safety PIN Award was presented to Ireland at the 13th PIN Conference in Brussels on 19 June 2019. The award recognises Ireland's long term performance in improving road safety. The background to the country's recent progress is detailed in an interview with Shane Ross, Minister for Transport, Tourism and Sport in Part III.

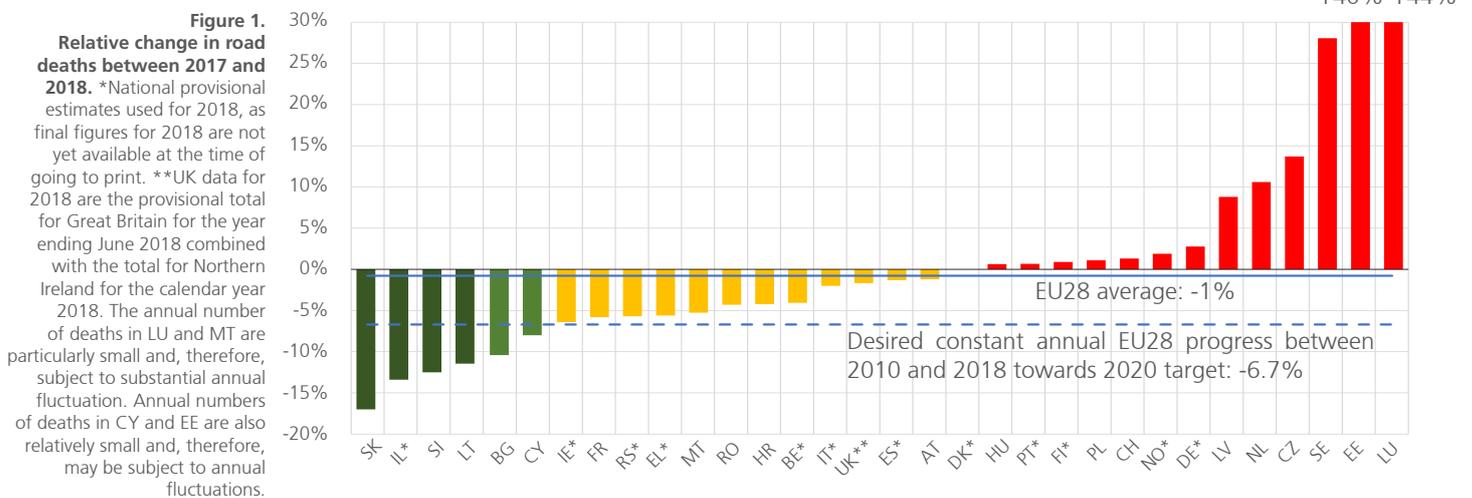
INDICATOR

The EU has set a target to halve the number of road deaths by 2020, based on their level in 2010. In this chapter, we track progress against this target using, as main indicators, the relative changes in the numbers of people killed on the road between 2017 and 2018 (Fig.1) and between 2010 and 2018 (Fig.2).

A person killed in traffic is someone who was recorded as dying immediately or within 30 days from injuries sustained in a collision on a public road. We also use road mortality expressed as the number of road deaths per million inhabitants - as an indicator of the current level of road safety in each country (Fig.7). Additionally, the risk expressed as the number of road deaths per billion km travelled is presented in countries where the data are available (Fig.8).

The data used are from national statistics supplied by the PIN panellist in each country. The numbers of road deaths in 2018 in Belgium, Denmark, Finland, Germany, Greece, Ireland, Italy, Portugal, Spain, Israel, Norway and Serbia are provisional as final figures were not yet available at the time of going to print. Annual numbers of deaths in Luxembourg and Malta are particularly small and are, therefore, subject to substantial annual fluctuation. Annual numbers of deaths in Cyprus and Estonia are also relatively small and, therefore, may be subject to considerable annual fluctuation. The UK figure for 2018 is the provisional total for Great Britain for the year ending June 2018 together with Northern Ireland's total for the calendar year 2018.

The full dataset is available in the annexes. Population figures were retrieved from the Eurostat database.



¹⁴ Annual numbers of road deaths in Luxembourg and Estonia are relatively small and, therefore, may be subject to large annual fluctuations.



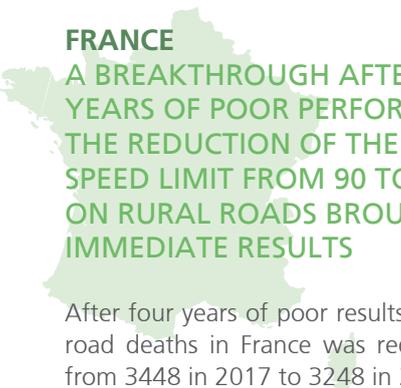
SLOVENIA
2018 WAS THE FIRST YEAR ROAD MORTALITY FELL BELOW THE EU AVERAGE

A total of 91 people lost their lives on Slovenian roads in 2018 compared to 104 in 2017. This represents 13 fewer road deaths or a 13% reduction. Road deaths have decreased by 34% since 2010. The annual numbers of road deaths in Slovenia are relatively small and are subject to annual fluctuation. However, the longer term trend goes downwards.

2018 was the first year Slovenia had a lower road mortality (44 road deaths per million) than the EU average (49). The road safety programme 2013-2022 set a target of no more than 35 per million by 2022.

“The close cooperation between many stakeholders certainly contributed to these good results. Orchestrated by the Traffic Safety Agency, responsible ministries, the police, the motorway company, the roads agency, non-governmental organisations, local communities and especially the Road Safety Council for prevention and education, all played a role. Not forgetting the media which helped reach the wider public.”

“Of course, we still face a lot of challenges, including access and inappropriate speed, drink-driving and, a growing issue, driver distraction related to the use of mobile devices while driving.”
 Vesna Marinko, Traffic Safety Agency, Slovenia



FRANCE
A BREAKTHROUGH AFTER FOUR YEARS OF POOR PERFORMANCE – THE REDUCTION OF THE LEGAL SPEED LIMIT FROM 90 TO 80 KM/H ON RURAL ROADS BROUGHT IMMEDIATE RESULTS

After four years of poor results, the number of road deaths in France was reduced by 5.8%, from 3448 in 2017 to 3248 in 2018 (Fig.1).

As a response to the lack of road safety progress, the French government announced a series of new road safety measures at the beginning of 2018, including lowering the standard speed limit from 90 to 80 km/h on two-lane rural roads with no separating guard rail. 63% of all road deaths occur on the country’s rural roads. The new speed limit came into force 1 July 2018.

A preliminary study by the French research institute Cerema and the French Road Safety Observatory¹⁵ showed that there were 127 fewer road deaths on rural roads limited to the new 80 km/h speed limit compared to the 2013-2017 average on the same roads for the months July to December. The same comparison for the rest of the French road network shows an improvement of only 15 deaths, which is not a significant change. Thus, France’s breakthrough in reducing the number of road deaths happened thanks to the lives saved on rural roads.

According to the data collected by Cerema for the same study, the increase in travel time after the implementation of the measure was just one second per km driven, on average.

The average travelling speed of light vehicles decreased by 3.9 km/h on rural roads affected by the new speed limit. However, speed compliance remains a challenge as 55% of observed vehicle speeds were above the 80 km/h speed limit, out of which 34% were between 80 and 90 km/h and 21% were above 90 km/h in the second half of 2018.¹⁶ 75% of safety cameras in France have been damaged since the start of the yellow vest protest movement in November 2018, observed average driving speeds increased by 1 km/h between November and March based on the measurements carried out far away from safety cameras.¹⁷

The French government has recently announced that the 80 km/h speed limit will continue to apply on national rural roads but the presidents of departmental councils will have the power to raise the speed limit to the old limit of 90 km/h on selected stretches of country rural roads.

¹⁵ Sécurité routière, Provisional road safety results 2018 and notes on the impact of the speed limit reduction to 80 km/h, <https://goo.gl/kzhyoM>
¹⁶ Cerema (January 2019), Abaissement de la vitesse maximale autorisée à 80 km/h Évaluation – Premiers éléments, <https://goo.gl/ZGmY8c>
¹⁷ ETSC (2019), Speed camera vandalism in France puts up to 75% of devices out of action, <https://bit.ly/2WcTnJl>

"As expected, the reduced speed limit on rural roads in France brought immediate positive road safety outcomes. The effect was similar to that observed when the first safety cameras were installed in France back in 2002 and 2003. However, if local authorities will decide to increase the speed limit on some of their network, this is bound to affect road safety and the impact expected initially with the 80 km/h measure, especially if the speed limit is increased on the main rural road network, which bears most traffic and therefore most fatal collisions. Moreover, road stretches with similar road design characteristics but different speed limits might get confusing for road users."

Manuelle Salathé, National Interministerial Road Safety Observatory, France

CZECH REPUBLIC **A 14% INCREASE IN ROAD DEATHS IN 2018, MAINLY DUE TO INAPPROPRIATE SPEEDS**

In 2018, 656 people were killed on the road in the Czech Republic, an increase of 14% compared to 2017 (Fig.1). 2395 were seriously injured, 5% more than in 2017. Since 2010, however, road deaths have been reduced by 18%.

Motorcyclist deaths increased dramatically, as well as the numbers of killed pedestrians. The highest relative increase was recorded for children with 19 deaths, 10 more than in 2017.

"2018 results have put us back to the 2013 level of road deaths. The numbers of road deaths and serious injuries both increased. This is a failure of meeting the targets of 426 road deaths and 2303 serious injuries set in the National Road Safety Strategy."

"The rise of deaths was mainly due to inappropriate speed and drink-driving - 39% of all fatal collisions occurred due to speeding and 14% were alcohol-related."

Jiří Ambros, Transport Research Centre (CDV)

SWEDEN

A 28% SURGE IN ROAD DEATHS IN 2018 MEANS SWEDEN LOSES ITS POSITION AS THE SAFEST EU MEMBER STATE IN TERMS OF ROAD DEATHS PER MILLION INHABITANTS

In Sweden, road deaths increased by 28%, from 253 in 2017 to 324 in 2018 (Fig.1). Since 2010, the numbers have increased by 22%. Sweden now has 32 road deaths per million inhabitants, putting the country in fourth place in the EU behind the UK, Ireland and Denmark.

"Our detailed analysis has shown that most of the increase concerned vehicle occupants on rural state roads and mainly involved head-on collisions or collisions at intersections on roads limited to between 70 and 90 km/h. This is acknowledged at the highest political level and intensified efforts are planned. Measures that are being considered include lowering the speed limit, improving speed compliance, reducing drink-driving, and measures to make cycling safer."

Anna Vadeby, National Road and Transport Research Institute (VTI)

GERMANY

A 3% INCREASE IN ROAD DEATHS IN 2018, A SIGNIFICANT GROWTH IN CYCLIST AND PTW RIDER DEATHS

A total of 3265 people lost their lives on Germany's roads in 2018 compared to 3177 in 2017. This represents a 2.8% increase (Fig.1). Road deaths have decreased by 11% since 2010.

"The warm and sunny weather in 2018 contributed, among other factors, to the increase: cyclist deaths jumped by 13.6% and PTW user deaths by 9%. While road collisions decreased by 0.4%, road casualties increased by 1.7% - 307,900 collisions resulted in 71,178 road deaths or serious injuries."

"The Ministry of Transport is preparing a new road safety programme together with

the Federal States and other stakeholders. The upcoming programme is foreseen to include targets for road deaths and serious injuries as well as performance indicators.”

Jacqueline Lacroix, German Road Safety Council (DVR)

mester of 2018 in the country on the possible reduction of the speed limits on rural roads from 100 to 90 km/h, a measure that was implemented 29 January 2019.”

Pilar Zori, Ministry of Interior, Spain

1.2 ONLY TWO EU COUNTRIES ARE ON TRACK TO REACH THE 2020 TARGET

The EU 28 collectively has reduced the number of road deaths by 20.7% over the period 2010-2018, far less than the 42.6% needed to stay on course to meet the 2020 target (Fig.2). Greece (-45%) and Lithuania (-43%) are the only EU Member States that are on track with the required reductions. Norway, a non-EU country, has reduced the number of road deaths by 49% since 2010.

SPAIN A REDUCTION IN ROAD DEATHS AFTER FOUR YEARS OF INCREASES

1806 people were killed on the roads in Spain in 2018, compared to 1830 in 2017 – a decrease of 1.3% (Fig.1). Since 2010, road deaths were reduced by 27%.

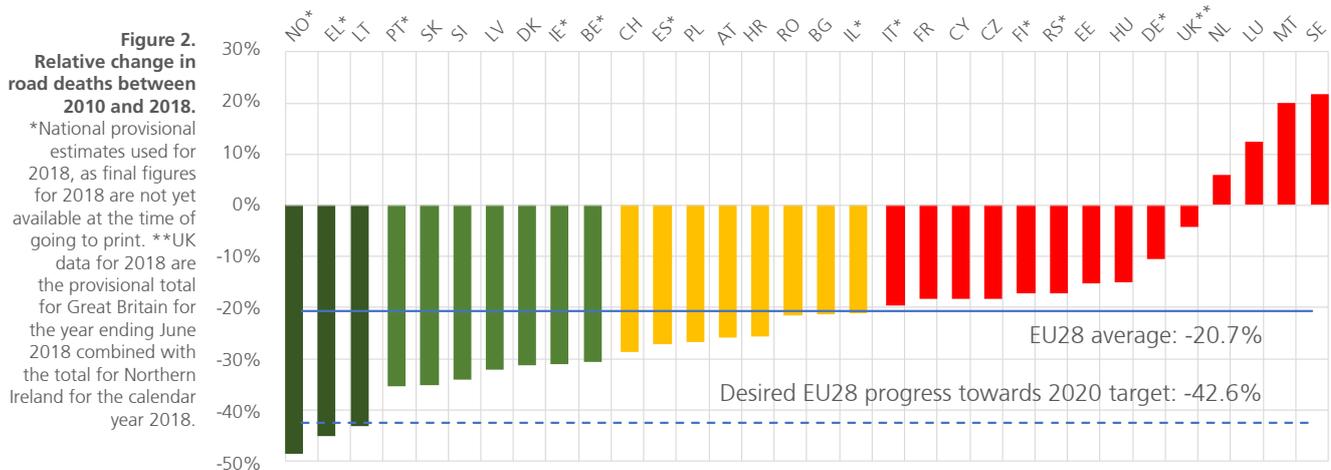
“Road deaths have been increasing for four consecutive years in Spain, we recorded an 8% rise between 2013 and 2017. In 2018, we finally recorded a positive development with a 1.3% reduction. While it is still early to explain the reasons behind this progress, we might point to the discussion that took place in the second se-

POLAND TOO SLOW ROAD SAFETY PROGRESS; SPEED COMPLIANCE REMAINS ONE OF THE MAJOR CHALLENGES

Road deaths increased by 1% in Poland, from 2831 killed in 2017 to 2862 in 2018 (Fig.1). Since 2010, road deaths in Poland decreased by 27% (Fig.2). There were 1045 fewer road deaths in 2018 compared to 2010. The number of serious injuries also decreased in 2018 seeing 10,963 cases compared to 11,103 in 2017, a 5% reduction.

In 2017, as many as 75% of observed vehicle speeds were higher than the 50 km/h speed limit on urban roads, 40% higher than the 90 km/h speed limit on rural roads and 62% higher than the 140 km/h speed limit on motorways. Poland is the only EU country where the default speed limit on urban roads changes from 50 to 60 km/h in the hours of night. In all other EU countries the standard speed limit on urban roads is 50 km/h.

Preliminary data analysis for 2018 indicates that the levels of speeding have not been reduced. Poland is also struggling to reduce the risk of being killed for pedestrians (especially at pedestrian crossings), cyclists and motorcyclists.



In addition, road deaths in collisions involving road users under the influence of alcohol went up by 4% last year from 187 in 2017 to 195 in 2018.

"The increase in people killed in road collisions two years before the completion of the national and EU road safety program is bad news. There are many signs that preventive actions are not enough and Poland will once again fail to achieve the target of halving the number of road deaths."

"High speed limits in built-up areas and on motorways, and, the 2016 decision of the Polish parliament to remove the right of municipal police officers to enforce the speed of vehicles using stationary safety cameras are examples of the resent approach to speed management in Poland. In official reports speed is always quoted as one of the two most important risk factors, but in practice the efforts are clearly not sufficient. I believe this is one of the main reasons for Poland's poor road mortality ranking in the EU."

Ilona Butler, Motor Transport Institute (ITS), Poland



SWITZERLAND STAGNATION IN REDUCING ROAD DEATHS IN 2018

233 people lost their lives on Swiss roads in 2018, three more than in 2017, representing a 1% increase (Fig.1). Road deaths among electric bicycle users have increased. Road deaths have decreased by 29% since 2010 (Fig.2). There was a 6% growth in the number of seriously injured, from 3654 in 2017 to 3873 in 2018.

"The increase in the number of road deaths we saw in 2018 illustrates that road safety cannot be taken for granted. No progress in reducing this number has been made since 2016. In the last two years, our decision makers have tended to rest on their laurels. In 2018, the Swiss Parliament decided to give the mandate to the Federal Council to prepare a draft revision of certain measures related to Via Sicura programme. The proposed revision should include abandoning the

planned introduction of alcohol interlocks for drink-driving offenders and relaxing sanctions for the most serious speeding offences. We are calling on the politicians to deliver their commitment taken in 2012 when they adopted Via Sicura program which included the introduction of the alcohol interlock program in Switzerland."

Yvonne Achermann, Swiss Council for Accident Prevention (bfu)



UK ROAD SAFETY MANAGEMENT CAPACITY REVIEW CONCLUDES THAT THE ABSENCE OF A DEFINED NATIONAL ROAD SAFETY AMBITION IN A MEASURABLE SAFETY PERFORMANCE FRAMEWORK IS SETTING BACK ROAD SAFETY EFFORTS

The UK is the safest country in the EU in terms of road deaths per million inhabitants, with a figure of 27.5. Yet, the progress since 2010 in further reducing road deaths was among the slowest in the EU. Road deaths in the UK were reduced by 4% from 1905 in 2010 to 1825 in 2018 (Fig.2). The number of serious injuries over the same period increased by 9%.

To assess the current status of road safety institutional delivery and opportunities for strengthening road safety action, the UK's Department for Transport commissioned a road safety management capacity review. The review concluded that the absence of a defined national road safety ambition in a measurable safety performance framework is setting back road safety efforts.

According to the review, there was insufficient central government leadership in road safety over the last decade. The report delivers a range of recommendations on various aspects for improved road safety management. The key recommendations are to develop and publish a new road safety strategy and action plans to improve road safety, and to ensure that identified priority actions are consistent with the Safe System approach.¹⁸

¹⁸Systra, Road Safety Management Capacity Review (2018), <https://bit.ly/2lw8edo>

BULGARIA

A NEWLY ESTABLISHED ROAD SAFETY AGENCY WILL ENSURE MORE EFFECTIVE ROAD SAFETY WORK

611 people died on the roads in Bulgaria in 2018 compared to 682 in 2017, a 10% reduction (Fig.1). Since 2010, the number of road deaths was reduced by 21% (Fig.2). Bulgaria still has the second highest road mortality in the EU with 87 deaths per million inhabitants compared to the EU average of 49.

To accelerate progress and improve coordination between the relevant authorities, a Road Safety State Agency was set up in Bulgaria in February 2019. Along with the coordination activities, the agency will be responsible for formulating, implementing and evaluating road safety policy.

"The Road Safety State Agency will show leadership in coordinating road safety work between national, regional and local authorities, civil society, business and scientists. We plan to fully integrate road safety into transport, infrastructure, law enforcement, healthcare and education policies."

Malina Kroumova, Road Safety State Agency, Bulgaria

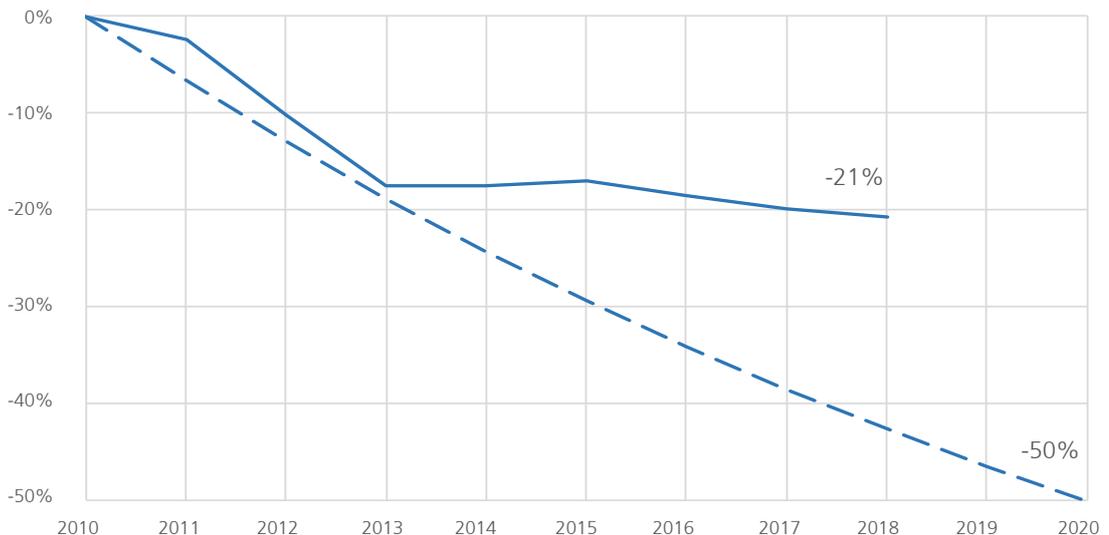
1.3 FIVE YEARS OF SLOW PROGRESS

Since 2010, the average annual progress in reducing the number of road deaths in the EU has been 2.8%, equivalent to a 21% reduction between 2010 and 2018 (Fig.3). Most of that progress was made in 2011, 2012 and 2013.

A 6.7% year-to-year reduction was needed over the 2010-2020 period to reach the 2020 target through consistent annual progress. Since 2013, the EU as a whole has been struggling to reach a breakthrough. The number of road deaths in the EU declined by only 4% since 2013. For the EU to reach the 2020 target, road deaths now need to be reduced by around 20.6% annually in 2019 and 2020 – an unprecedented and highly unlikely possibility.

The EU28 reduced the number of road deaths by 21% between 2010 and 2018 (Fig.4). The EU15¹⁹ reduced the number of road deaths by 19% in the same period, the EU10²⁰ by 26% and the EU3²¹ by 22%.

Figure 3.
Reduction in the number of road deaths since 2010 (blue line) plotted against the EU target for 2020 (blue dotted line).

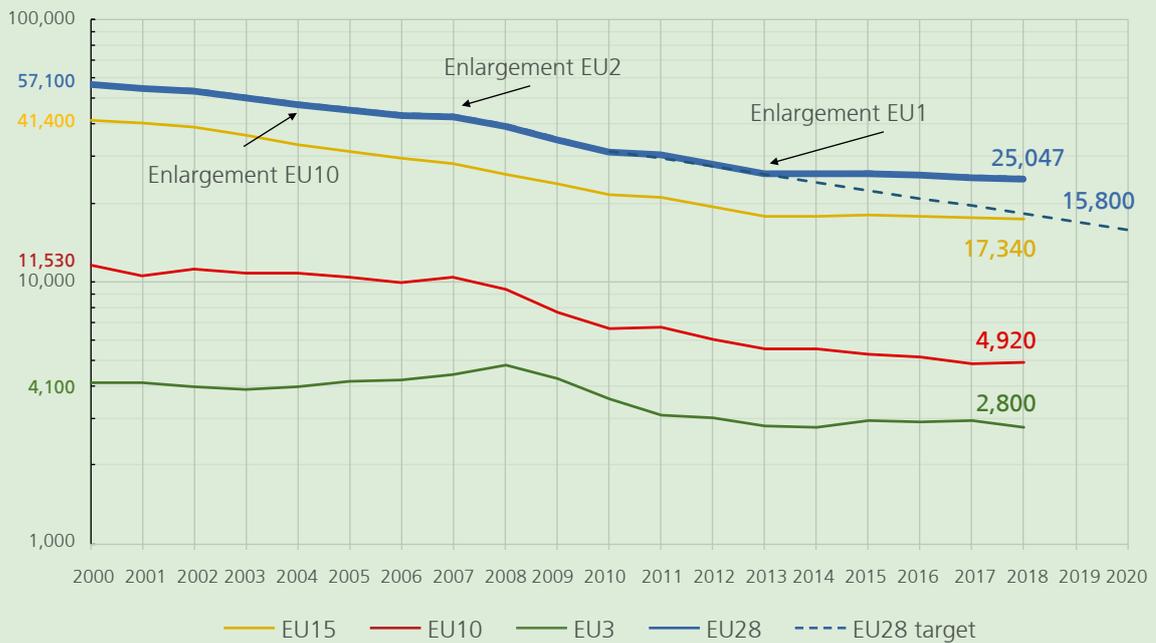


¹⁹ The EU15 were the first fifteen countries to join the EU: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom

²⁰ The EU10 were the group of countries that joined the enlarged EU in 2004: Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia.

²¹ The EU3 includes the latest three countries to join the EU: Romania and Bulgaria in 2007 and Croatia in 2013.

Figure 4. Reduction in road deaths since 2000 in the EU28 (blue line), the EU15 (yellow line), the EU10 (red line) and the EU3 (green line). The logarithmic scale is used to enable the slopes of the various trend lines to be compared.



1.4 SOME 6550 FEWER ROAD DEATHS IN THE EU IN 2018 THAN IN 2010 IS OF CONSIDERABLE VALUE TO THE PEOPLE OF THE EU

There were around 6550 fewer road deaths in 2018 than in 2010 in the EU28. This reduction is about 6900 road deaths short of the reduction that would have occurred in 2018 if annual EU progress had been on track towards the 2020 road safety target by a constant year-to-year reduction of 6.7%.

39,000 road deaths have been prevented in the EU over the period 2011-2018 compared to 2010. 26,450 more lives could have been saved if the annual reduction of 6.7% had been achieved (Fig.5, left column).

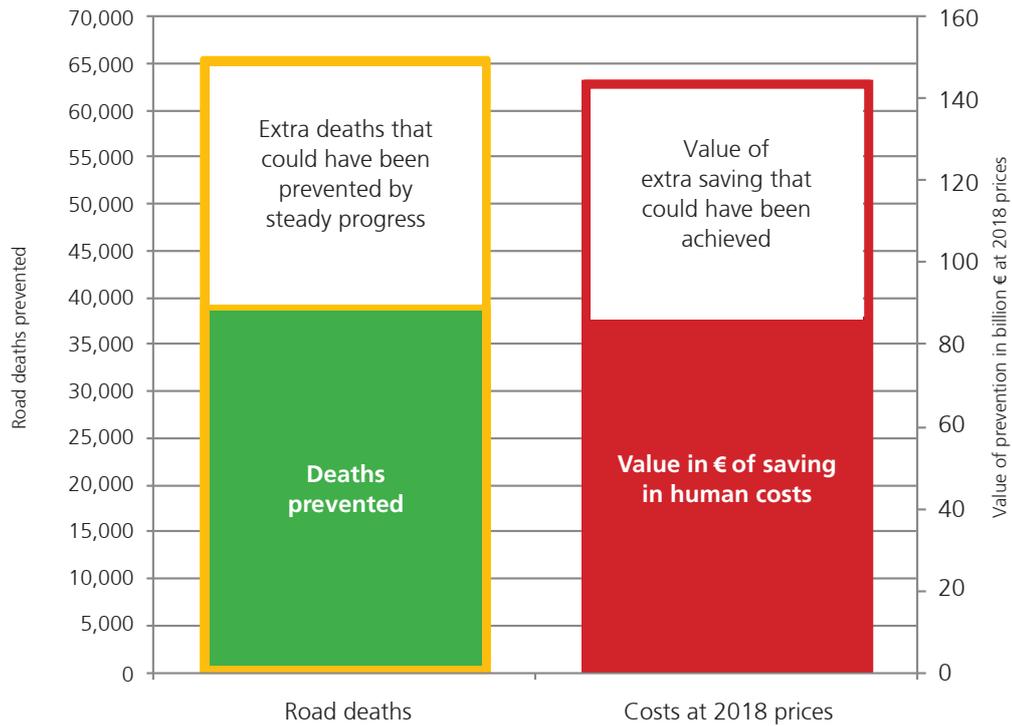
Putting a monetary value on prevention of loss of human life and limb can be debated on ethical grounds. However, doing so makes it possible to assess objectively the costs and the benefits of road safety measures and helps to make the most effective use of generally limited resources.

The Value of Preventing one road Fatality (VPF) estimated for 2009 in the 5th PIN Annual Report has been updated to take account of changes to the economic situation in the intervening years. As a result, we have taken the monetary value for 2018 of the human losses avoided by preventing one road death to be € 2.2 million at factor cost.

The total value of the reductions in road deaths in the EU28 for 2018 compared to 2010 is thus estimated at approximately € 14.4 billion, and the value of the reductions in the years 2011-2018 taken together is about € 85.8 billion (Fig.5, right column).

If the EU had moved towards the 2020 road safety target through constant progress of 6.7%, the greater reductions in deaths in the years 2011-2018 would have increased the valuation of the benefit to society by about € 58 billion to about € 144 billion over those years (Fig.5, right column).

Figure 5. Reduction in the number of road deaths in EU28 over the period 2011-2018 and valuation at 2018 prices and value, together with the additional savings – both in deaths prevented and in value in € of preventing this number of deaths – that could have been achieved if the EU had moved towards the 2020 road safety target by steady progress.

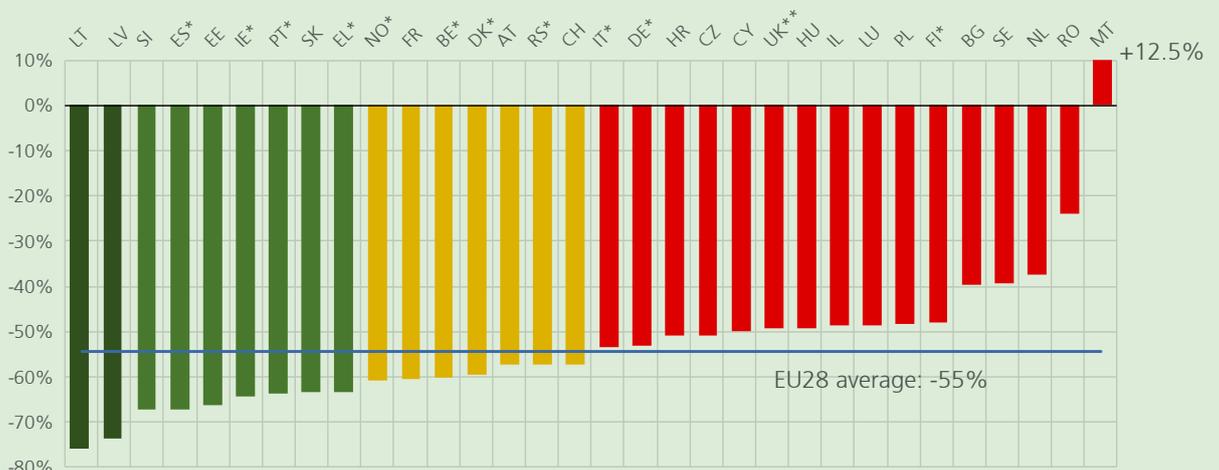


Given the financial constraints that many EU countries face, the value to society of improving road safety should be taken into account in the policy and budgetary planning processes, expressing in monetary terms the moral imperative of reducing road risk. The high value of societal costs avoided during 2011-2018 shows once more that the saving potential offered by sustained road safety improvements is considerable, making clear to policy-makers the potential for road safety policies to provide a sound investment. Unfortunately, following pressure to reduce public spending, the number of police officers on the roads enforcing driving laws has dropped in several countries, as well as budgets for road maintenance.

1.5 A 55% REDUCTION IN THE NUMBER OF ROAD DEATHS SINCE 2001

Since the first EU target for reducing the number of road deaths was introduced in 2001, two of the three Baltic States achieved the highest reductions. Lithuania reduced the number of road deaths by 76% and Latvia by 73% (Fig.6). They are followed by Slovenia and Spain with a 67% reduction and Estonia with a 66%. The progress has been slow in Romania with a 24% reduction, the Netherlands with 39%, Sweden with 39% and Bulgaria with 40%.

Figure 6. Relative change in road deaths between 2001 and 2018. *National provisional estimates used for 2018, as final figures for 2018 are not yet available at the time of going to print. **UK data for 2018 are the provisional total for Great Britain for the year ending June 2018 combined with the total for Northern Ireland for the calendar year 2018.

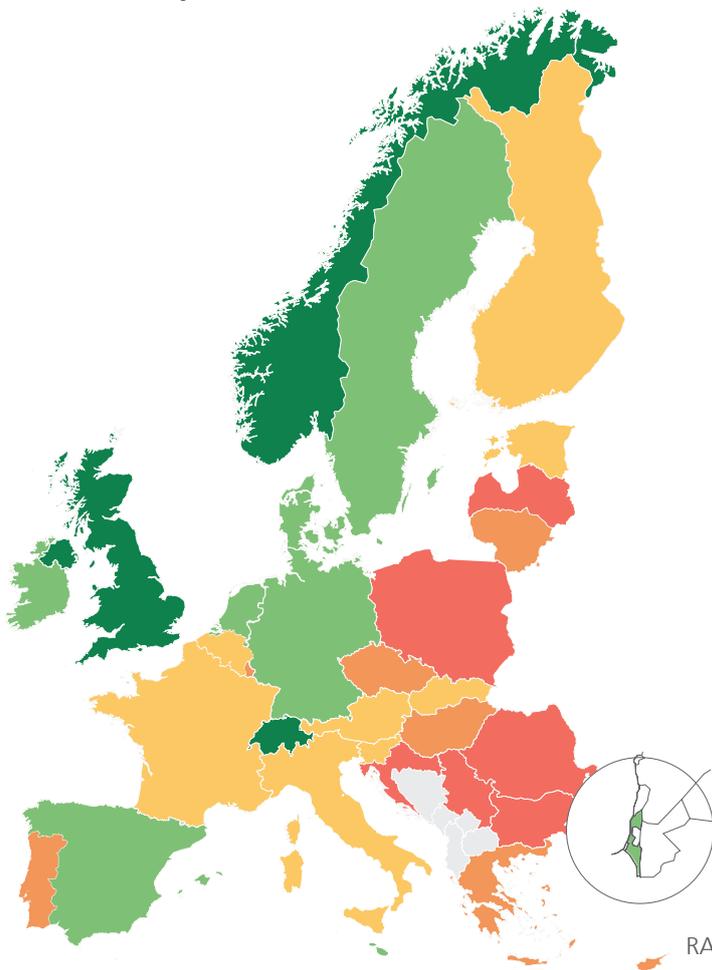
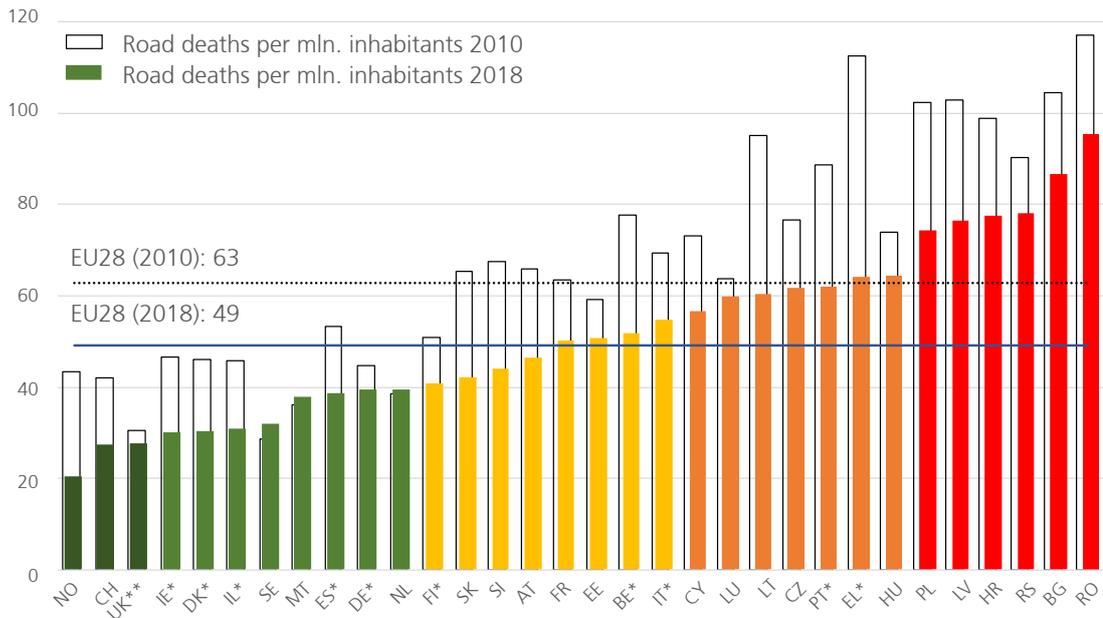


1.6 NORWAY AND SWITZERLAND ARE THE SAFEST COUNTRIES FOR ROAD USERS

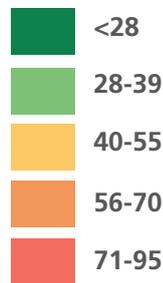
In the EU28 the overall level of road mortality was 49 deaths per million inhabitants in 2018, compared with 63 per million in 2010 (Fig.7). The mortality in the PIN countries still differs by a factor of three between the groups of countries with the highest and the lowest risk.

For the second year in a row, Norway is the leader among PIN countries with 20 road deaths per million inhabitants, followed by Switzerland and the UK with less than 27.5 per million inhabitants in 2018. These countries, together with Sweden, are also among the leaders in terms of road risk (Fig.8). In Ireland, Denmark, Israel and Sweden, mortality is between 30 and 32 per million. The highest road mortality is in Romania and Bulgaria with 96 and 87 road deaths per million inhabitants respectively.

Figure 7. Mortality (road deaths per million inhabitants) in 2018 (with mortality in 2010 for comparison).
*National provisional estimates used for 2018, as final figures for 2018 are not yet available at the time of going to print. **UK data for 2018 are the provisional total for Great Britain for the year ending June 2018 combined with the total for Northern Ireland for the calendar year 2018.



MAP 2: Road deaths per million inhabitants in 2018 (Fig.7)



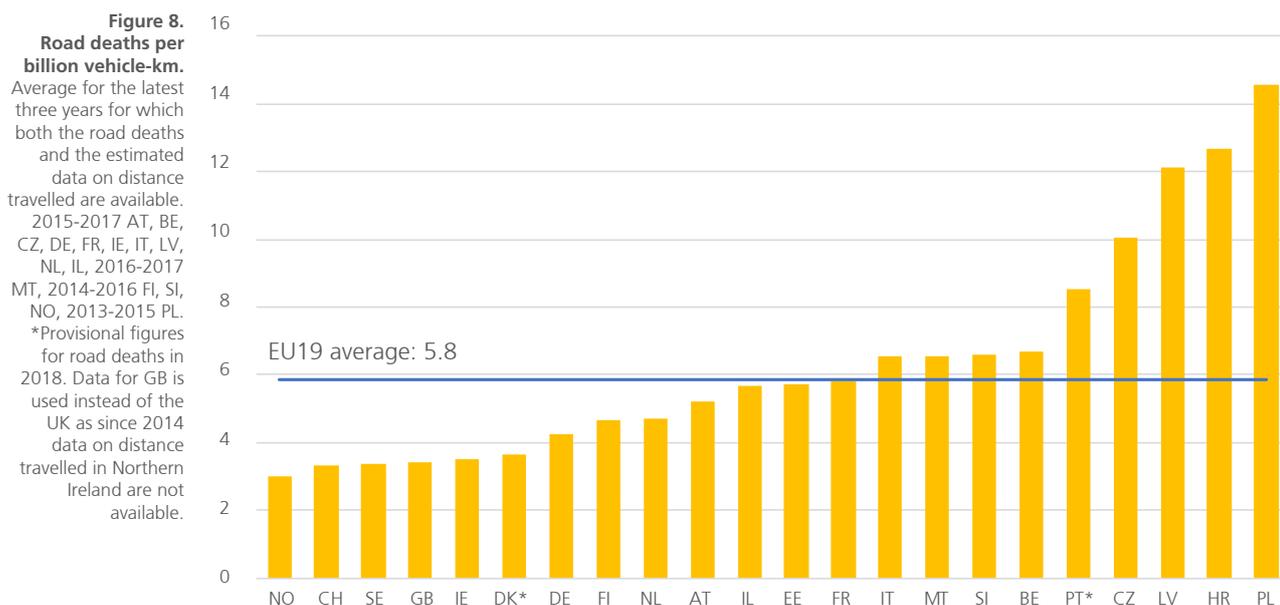
1.7 ROAD DEATHS PER VEHICLE-DISTANCE TRAVELLED

Fig.8 shows the road risk measured in deaths per billion vehicle-km travelled for the 22 countries where up-to-date data are available. This indicator complements the well-established indicator of road mortality (Fig.7).

Measured in this way, Norway, Switzerland, Sweden, Great Britain, Ireland and Denmark have the lowest risk among the countries collecting up-to-date data (Fig.8). Road risk in Poland, Croatia and Latvia is almost four times higher than in the countries at the top of the ranking.

Differences between the relative positions of countries in Fig.7 and Fig.8 can arise from differences in aspects such as the levels of motorcycling, cycling or walking, the traffic volume, the proportions of traffic on motorways or rural roads and different methods for estimating the distance travelled.

While Malta's road mortality rate is under the EU average, the number of road deaths per vehicle-km travelled is above the average of the countries that can provide data on distance travelled. This can be largely attributed to the short vehicle distances travelled in Malta, and the significant proportion of travel that takes place in urban areas, when compared to the other countries.



RECOMMENDATIONS TO MEMBER STATES

- Seek to accelerate the progress by all available means, including applying proven traffic law enforcement strategies according to the EC Recommendation on Enforcement.²²
- Adopt and implement the Safe System approach to road safety by addressing all elements of the road transport system in an integrated way, and adopting shared overall responsibility and accountability between system designers and road users.²³
- Provide sufficient government funds to allow the target-oriented setting of measures, and set up financing and incentive models for the regional and local level.
- Prepare post-2020 Road Safety Plans, including national targets for reducing serious injuries based on the MAIS3+ standard alongside the reduction of road deaths and quantitative sub-targets based on performance indicators.
- Use the evidence gathered to devise and update relevant policies. Make the choice of measures based on sound evaluation studies and - where applicable - cost effectiveness considerations, including serious injuries in the impact assessment of counter measures.
- Conduct a thorough qualitative assessment of current road safety strategies to evaluate the levels of implementation and effectiveness of the foreseen road safety measures in reaching road safety targets.

RECOMMENDATIONS TO THE EUROPEAN COMMISSION

Deliver on the commitments stated in the 5th EU Strategic Action Plan:²⁴

- Finalise and start collecting with Member States a list of key performance indicators to monitor progress;
- Adopt a long-term operational plan for 2030, including investments in measures, a timetable and structure for delivering the two targets already endorsed;²⁵
- Set the strategy within the context of changing mobility patterns including new trends such as automation, increased walking and cycling due to promotion of active travel and an ageing population.

Following the adoption of the new minimum safety standards for new vehicles:²⁶

- Allow a high level of performance of Intelligent Speed Assistance systems to be fitted in all new vehicles;
- Deliver on the estimated number of deaths and serious injuries prevented by adopting strong and timely secondary regulation implementing the General Safety Regulation.
- Consider the feasibility and acceptability of non-overrideable Intelligent Speed Assistance in the future.

Within the context of the revised Infrastructure Safety Management Directive 2008/96²⁷:

- Support Member States in implementing the revised Directive.

Within the context of the revision of the Cross-Border Enforcement Directive 2015/413²⁸:

- Strengthen the enforcement chain, including mandatory notification of the owner of the vehicle by the country of offence.
- Work towards consistent levels of enforcement of Driving and Resting times across the EU.

Within the context of the revision of the Driving Licence Directive 2006/126²⁹:

- Ensure that the Directive remains valid for new technologies and autonomous and semi-autonomous driving.

Within the context of the EU strategy on automated mobility³⁰:

- Develop a coherent and comprehensive EU regulatory framework for the safe deployment of automated vehicles.³¹
- Revise type approval standards to cover all the new safety functions of automated vehicles, to the extent that an automated vehicle will pass a comprehensive equivalent to a driving test. This should take into account high risk scenarios for occupants and road users outside the vehicle.³²

²² EC Recommendation on Enforcement in the Field of Road Safety 2004/345, <http://goo.gl/Vw0zhN>

²³ OECD-ITF (2016), Zero Road Deaths and Serious Injuries, Leading a Paradigm Shift to a Safe System approach, <https://goo.gl/hTE4BG>

²⁴ European Commission (2018), Europe on the Move, Sustainable Mobility for Europe: safe, connected, clean, Annex 1 Strategic Action Plan on Road Safety, <https://goo.gl/9dx2yC>

²⁵ ETSC (2018), Briefing: 5th EU Road Safety Action Programme 2020-2030, <https://goo.gl/ZX33s1>

²⁶ Regulation (EU) 2019/... of the European Parliament and of the Council of on type-approval requirements for motor vehicles and the protection of vehicle occupants and vulnerable road users, amending Regulation (EU) 2018/858, <https://bit.ly/2CRJWe6>

²⁷ Directive of the EP and of the Council amending Directive 2008/96/EC on road infrastructure safety management, <https://bit.ly/2X2Vx1W>

²⁸ 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, <https://goo.gl/vZgQys>

²⁹ Directive 2006/126/EC of the European Parliament and of the Council of 20 December 2006 on driving licences, <https://goo.gl/cDJt8i>

³⁰ European Commission (17.05.2018), Communication from the European Commission to the European Parliament, the Council, the European Economic and Social Committee, the Committee of the Regions On the road to automated mobility: An EU strategy for mobility of the future, <https://goo.gl/kdqY6V>

³¹ ETSC (2016), Prioritising the Safety Potential of Automated Driving in Europe, <https://goo.gl/TojCUL>

³² Ibid



PART II

SOME COUNTRIES ARE MAKING
PROGRESS IN REDUCING SERIOUS
INJURIES, BUT OVERALL EU
PROGRESS IS STATIC

02

2.1 THE FIRST EU TARGET TO HALVE SERIOUS INJURIES BETWEEN 2020 AND 2030

A new target for reducing serious road traffic injuries by 50% between 2020 and 2030 was announced by the European Commission in 2018. The announcement followed the adoption of the Valletta declaration in 2017 by EU transport ministers which formally called for an EU-wide serious injury reduction target.

In 2016, the European Commission announced that an estimated 135,000 people were seriously injured on EU roads in 2014, the first time an EU-wide figure had been published. This move required the adoption by all EU member states of a common definition of what constitutes a serious road injury - an in-patient with an injury level of MAIS3 or more (see the box MAIS3+ definition).

The official figures for serious injuries after 2014 according to the MAIS3+ definition had not been published by the European Commission at the time this report went to press. Similarly, there are no data available for earlier years except for a few countries.

2.2 SOME COUNTRIES REDUCED THE NUMBER OF SERIOUSLY INJURED SINCE 2010

In addition to MAIS3+ data, Member States should also continue collecting data based on their previous national definitions. This will enable monitoring of progress in the same way as prior to 2014 at least until these rates of progress can be compared with those under the new definition.

It is not possible to compare the number of serious injuries between PIN countries according to national definitions of serious injury as both the definitions and the levels of underreporting vary widely. Our comparison therefore takes as a starting point the changes in the numbers of serious injuries according to the national definitions since 2010 (Fig.9).

In most PIN countries, the number of people seriously injured in road collisions according to the national definition are recorded by the police. Sample studies have shown that the

MAIS3+ DEFINITION

The Abbreviated Injury Scale (AIS) is a globally accepted trauma classification of injuries, which ranges from 1 (minor injuries) to 6 (non-treatable injuries) and is used by medical professionals to describe the severity of injury for each of the nine regions of the body (Head, Face, Neck, Thorax, Abdomen, Spine, Upper Extremity, Lower Extremity, External and other). As one person can have more than one injury, the Maximum Abbreviated Injury Score (MAIS) is the maximum AIS of all injury diagnoses for a person.

HOW ARE SERIOUS INJURY DATA COLLECTED ACROSS THE EU?

The High Level Group on Road Safety representing all EU Member States identified three main ways Member States can choose to collect data in accordance with the MAIS3+ definition:

1. continue to use police data but apply a correction coefficient based on samples;
2. report the number of injured based on data from hospitals;
3. create a link between police and hospital data.

All methods used for estimating the number of serious traffic injuries (MAIS3+) are in one way or another based on hospital records. Even when applying correction to police data, it is necessary to have samples of hospital data to derive the correction factors.³³ ETSC recommends the third option but, as matching police and hospital data is not straightforward, Member States that have not yet started this process should make use of option 2 or, if that is not possible nationwide, option 1. Within the framework of the SafetyCube project financed by the European Commission, a study was published on serious road traffic injury data reporting practices. The study provides guidelines and recommendations for each of the three main ways to estimate the number of serious road traffic injuries in order to assist Member States in MAIS3+ data collection.³⁴

The numbers of serious injuries based on MAIS3+ are not yet fully comparable between EU Member States due to different data collection methods and varying quality of the data. This is why in Fig. 9 and 10, the numbers of seriously injured according to the prevailing national definitions are used instead.

³³ SafetyCube (2016), Practical guidelines for the registration and monitoring of serious traffic injuries, Deliverable 7.1, <https://goo.gl/hWHPCG>

³⁴ Ibid

actual number is often considerably higher than the officially recorded number based on police reports. In general, the lower the injury severity, the higher the underreporting in police accident statistics tends to be.

The level of reporting tends to also be lower for pedestrians, cyclists and PTW riders than for car occupants. This is especially the case when no motor vehicle is involved in a collision.

Underreporting also occurs when a collision between one motor vehicle and a pedestrian or a cyclist does not result in the immediate death of a victim. In such cases the driver involved or eyewitnesses call the emergency services but not necessarily the police. Single vehicle collisions with no other road users involved may also be underreported.

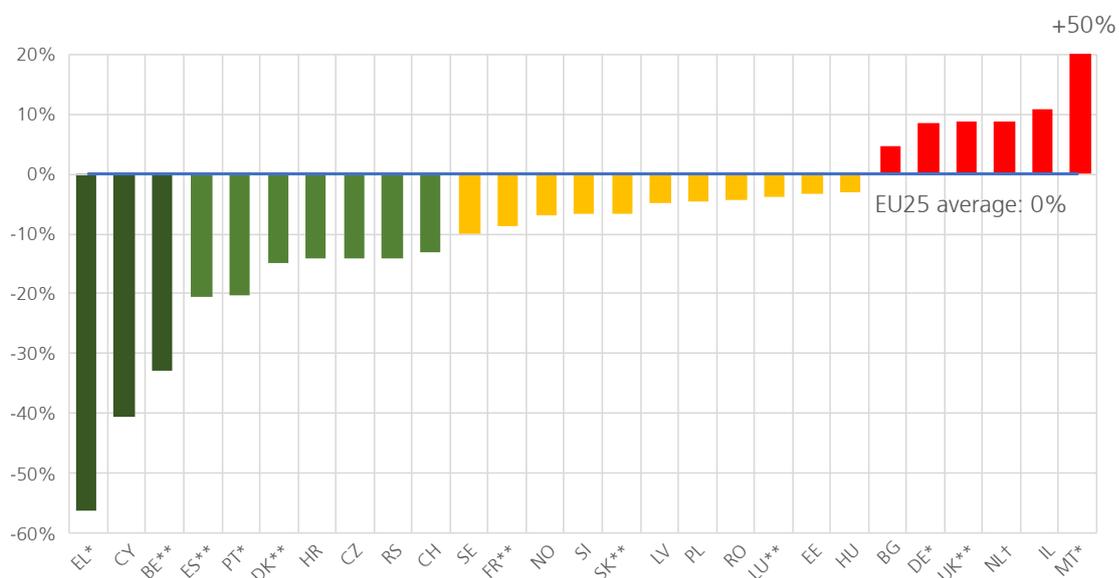
Fig.9 shows the relative change in the number of serious injuries over the period 2010-2018 using current national definitions of serious

injury. National definitions supplied by PIN panellists are available in the annexes.

The number of people recorded as seriously injured, based on national definitions, decreased in 18 out of 25 EU countries that collect data. However, in the EU25 collectively the progress in reducing serious road traffic injuries has stagnated since 2010 (Fig.9). Serious injuries recorded in Germany, the UK and the Netherlands increased and this has had a significant effect on the EU average as recorded serious injuries in these countries represent 53% of all recorded serious injury data in the EU25. The number of serious injuries increased by 50% in Malta and by 9% in the Netherlands, the UK and Germany since 2010.

At the other end of the ranking is Greece – it achieved the biggest decrease in the number of recorded serious injuries since 2010 with a 56% reduction, followed by Cyprus with 41% and Belgium with 33%.

Figure 9.
Relative change in recorded seriously injured (national definitions) over the period 2010 and 2018 for countries where data are available.
 *National provisional estimates used for 2018, as final figures for 2018 were not available at the time of going to print.
 **2010-2017. †NL - national definition is MAIS2+, linked police and hospital records, 2010-2017. Substantial changes in the reporting system were introduced in AT in 2012 and in IE in 2014, therefore, the number of serious road injuries in AT and IE are excluded from the figure but are included in the EU average. PIN countries using a definition of seriously injured similar to having injuries requiring at least one night in a hospital as an in-patient: AT, BE, CY, DE, EE, ES, FR, EL, IE, LV, LU, PT, UK, CH, IL.



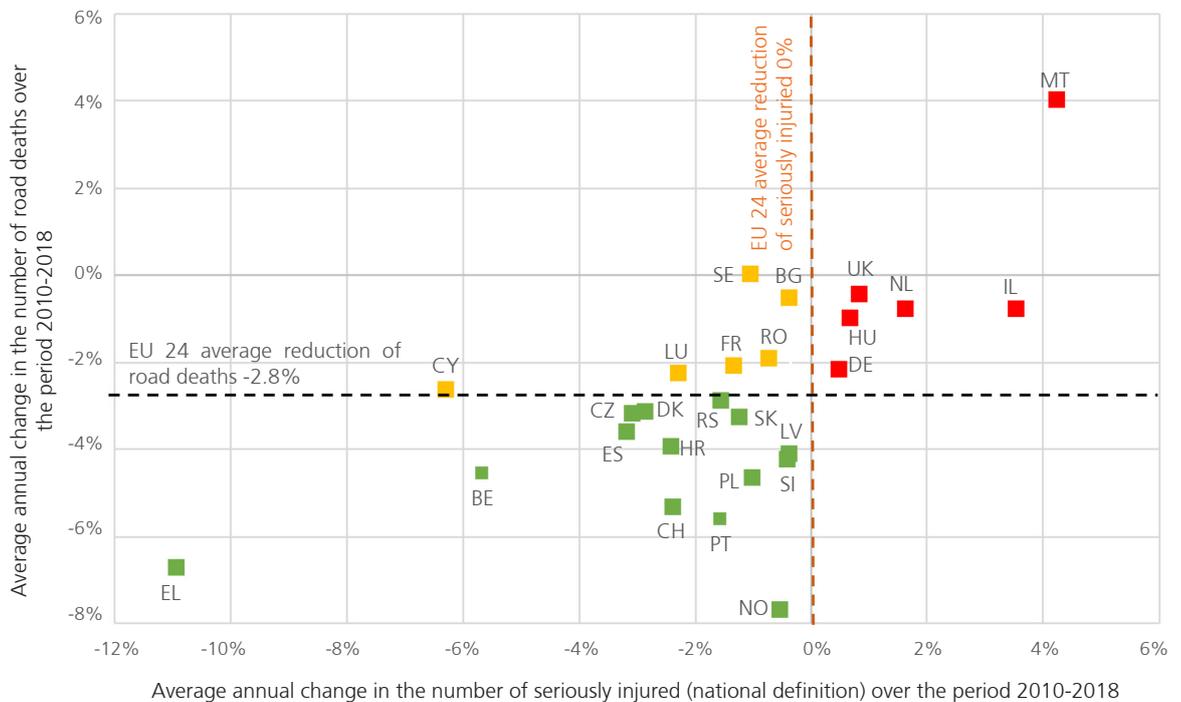
2.3 ANNUAL REDUCTION IN SERIOUS INJURIES STILL BEHIND ROAD DEATH REDUCTION

Fig.10 gives an overview of national progress in reducing the number of road deaths and the numbers of serious injuries (based on each national definition) over the last ten years. The figure aims to indicate to what extent the two have moved at a similar pace. The average annual relative change in road deaths of 2.8% is plotted on the vertical axis, and the average annual relative change in serious injuries of 0% on the horizontal axis. The EU averages are shown by dotted lines. Green markers are used for countries having performed better than the EU average in both death and serious

injury reduction, red markers for those below the EU averages in both death and serious injury reduction and amber markers for all others - better than average in deaths but not in serious injury or vice-versa.

Greece, Belgium, the Czech Republic, Spain, Denmark, Croatia, Switzerland, Serbia, Slovakia, Slovenia, Latvia, Norway, Poland and Portugal have performed better than the EU average in reducing both serious injuries and road deaths since 2010. Greece, Cyprus, Belgium and Spain reduced serious injuries at a faster pace than road deaths since 2010. The annual reduction rates of serious injuries are also related to reporting rates.

Figure 10. Estimated average annual change in the number of seriously injured according to the national definition over the period 2010-2018 for countries where data are available, plotted against the estimated average annual change in road deaths over the same period. BE, DK, ES, FR, LU, NL, SK, UK, NO 2010-2017 as serious injury data for 2018 are not available, NL – data on MAIS2+ or more, SE – hospital data. Substantial changes in the police reporting system were introduced in AT in 2012 and in IE in 2014, therefore, the number of serious road injuries in AT and IE are excluded from the figure but are included in the EU average.



INDICATOR Fig. 9 and 10

The numbers of seriously injured were supplied by the PIN panellists in each country using the prevailing national definition. The full dataset, together with the national definitions, are available in the annexes. The numbers of people seriously injured based on national definitions in 2018 are provisional in Germany, Greece, Great Britain, Portugal, Israel and Serbia. Fifteen countries (AT, BE, CY, DE, EE, ES, FR, EL, IE, LV, LU, PT, UK, CH, IL) use similar definitions of severe injuries, spending at least one night in hospital as an in-patient or a close variant of this. In practice, however, in most European countries, there is unfortunately no standardised communication between police and hospitals and the categorisation as “serious” is often made by the police. Within each country, a wide range of injuries is categorised by the police as serious under the applicable definition. They range from lifelong disablement with severe damage to the brain or other vital parts of the body to injuries whose treatment takes only a few days and which have no longer-term consequences.

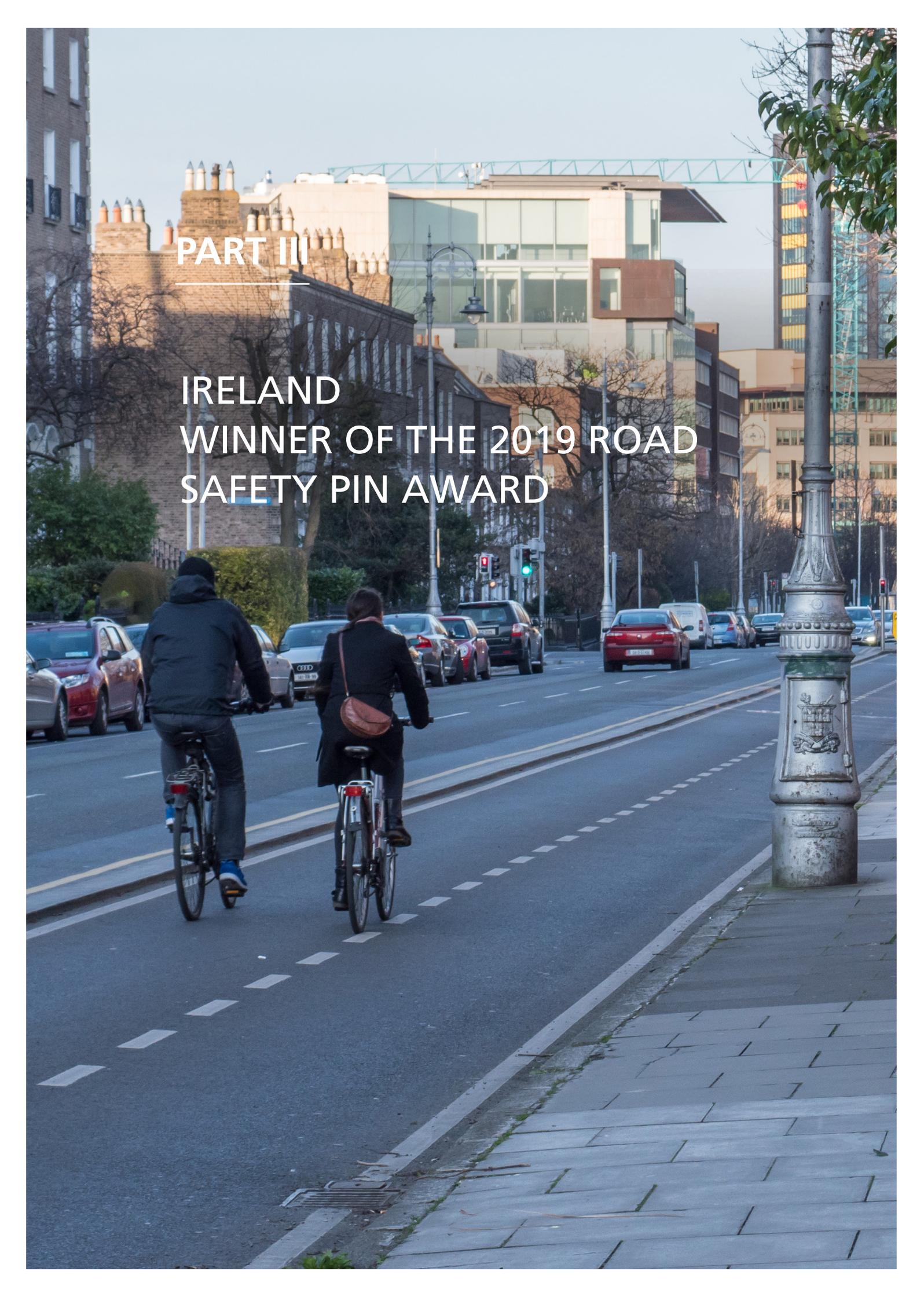
RECOMMENDATIONS TO MEMBER STATES

- Set national reduction targets for seriously injured based on MAIS3+ alongside the reduction of deaths in the upcoming road safety strategies.
- Collect serious injury data according to the MAIS3+ definition and continue collecting data based on national definitions.
- Include serious injuries in the impact assessment of countermeasures.
- Streamline the emergency response chain and increase the quality of trauma management in order to mitigate collision consequences more effectively.

RECOMMENDATIONS TO EU INSTITUTIONS

- Adopt a new joint-EU strategy to tackle serious injuries involving all directorate generals in particular DG Health and Food Safety.
- Prioritise short-term measures that can be implemented with existing knowledge, e.g. measures to improve speed limit compliance will reduce injury severity and have an immediate effect.
- Support Member States with an exchange of best practice in MAIS3+ recording procedures and in training of data-handling professionals.
- Continue to review the procedures used by Member States to estimate the number of people seriously injured with a view to achieving comparability, even though a variety of methods will be used in practice to implement the common definition.
- Include the numbers of seriously injured in the impact assessment of countermeasures.
- Treat road injuries and deaths as a public health problem as well as a mobility issue.
- Adopt a new EU health strategy including road traffic injury prevention measures.





PART III

IRELAND
WINNER OF THE 2019 ROAD
SAFETY PIN AWARD

IRELAND

WINNER OF THE 2019 ROAD SAFETY PIN AWARD

INTERVIEW WITH THE IRISH MINISTER FOR TRANSPORT, TOURISM AND SPORT, MR. SHANE ROSS



Road deaths in Ireland have been cut by 31% since 2010, going down from 212 in 2010 to 146 in 2018 (Fig.2). Ireland registered a 6% reduction in road deaths in 2018 compared to 2017 levels (Fig.1).

The progress is also visible when measured in terms of road deaths per population: the number went down from 47 road deaths per million residents in 2010 to 30 in 2018 (Fig.7). Ireland is the second safest European Union Member State in 2018 in terms of road mortality and has moved up five places in the ranking since 2010 when it held 7th place.

Ireland's road safety achievements have been recognised by ETSC with the PIN award in 2010. Ireland has been able to continue progress in reducing road deaths and the ETSC gives the road safety award to Ireland again.

In this interview Shane Ross, the Minister for Transport, Tourism and Sport gives his insights into the country's recent success and future plans.

ETSC: Ireland's example shows that countries leading in road safety can still achieve substantial progress. According to you, which measures yielded the best results in the last five years?

In three of the last four years, we have seen the lowest ever number of road deaths in Ireland. While we are pleased with this result, we are by no means complacent, particularly in the context of increases in deaths from 2012 to 2014 and again in 2016. Essentially, these increases served as a catapult to force change, and consolidate the efforts of stakeholders across all areas of intervention.

A critical event for us was the Mid-Term Evaluation of the government Road Safety Strategy 2013-2020, held in 2016, where all stakeholders were brought together to brainstorm how to move forward, in light of the worrying upward trend in road deaths. Here, a 'back to basics' approach was agreed, focusing on the killer behaviours, particularly speed, drink and drug-driving, mobile phone use and non-wearing of seatbelts. The recipe is quite simple: focus on addressing the biggest killers, and you will see the results.

Take alcohol as an example... We had thought that the drink-driving problem was solved, until a report published by the RSA indicated that alcohol was a factor in 38% of fatal collisions over the period 2008-2012. Alcohol has been a major focus in the last five years. While we had already reduced the drink-drive limit BAC to 50mg/100ml back in 2011, this was not enough. After 2 years of campaigning and significant political resistance, particularly among rural politicians and the drinks industry, we finally succeeded in increasing the penalty for drink-

driving at lower levels, introducing automatic disqualification for drink-drivers caught with a BAC between 50-80mg/100ml. Previously, this had been a penalty point offence. This was a controversial measure, but, it meant that drink-driving was constantly in the media, and this media focus may also have helped road safety.

ETSC: Ireland introduced its Road Safety Strategy 2013-2020 a few years ago. How do you ensure smooth coordination between the different authorities responsible for the implementation of the strategy?

Maintaining good working relationships with our stakeholders is one of the cornerstones of the success of the current strategy. We have high level oversight meetings quarterly, which I chair. During these, we review progress on the 144 individual actions set out in the strategy, and also the 22 new actions put in place after the Mid-Term Evaluation. For each action in the action plan, we set out who is the lead stakeholder and who is the support, to make sure the job gets done. There are clear timelines, and regular follow-ups. In addition to these quarterly high level meetings, as part of the Mid-Term Evaluation, we made a commitment to meet all our stakeholders individually every 12 weeks. All of our stakeholders are very committed to achieving our targets and improving road safety. We would not be where we are today without their commitment and hard work.

ETSC: What are the key road safety challenges that Ireland faces today? What has been done so far and how are you planning to address the challenges in the long term (e.g. in the post 2020 strategy)?

Despite our recent success in reducing road deaths, we are concerned that, based on provisional data for 2018, there were 8 serious injuries on Irish roads for every road death that occurred. There are still too many serious injuries occurring on Irish roads, and we must reverse the upward trend. This will need to be a continued focus of our next strategy.

Broadly, our focus will remain on the killer behaviours. We are in the early stages of our drug-driving roadside testing, and we will be focusing this year and next, on collecting data

in relation to drugs as a factor in road deaths to further inform the development of our interventions in this area. As with many of our EU counterparts, Vulnerable Road Users (VRUs) are representing a greater share of road users killed, and VRU focused initiatives will also be prioritised in the next strategy.

Alcohol is still a problem, and while much work has been done in recent years in terms of campaigns and legislation/penalties, we will be looking at the feasibility of introducing alcohol interlock programmes as a sanction for repeat drink-driving offenders.

In terms of our awareness and education campaigns, our challenge is to keep our communications activity targeted, relevant, and engaging, while ensuring they have a clear call-to-action.

In terms of data, we recognise that we do not have adequate risk exposure data, and for VRUs in particular. Given the increasing popularity of cycling in Ireland, and the growing number of cycling injuries we are seeing, improving our exposure data is critical in order to better understand and reduce cyclist risk on our roads. We are engaged in a long term project with an international expert, and all of our Irish stakeholders who hold travel pattern data, to address the gaps in risk exposure data.

Technology will also be a key focus over the next strategy. We are acutely aware of the dual potential of technology to both help and potentially hinder road safety. So here, we will be looking at countering driver distraction from mobile phones on the one hand, and the potential harnessing of technology such as Alcohol Interlock Programmes and Intelligent Speed Assistance on the other. We are currently looking at e-scooters in terms of how to best regulate for these, and future-proofing our regulations to allow for the safest possible introduction of similar personal mobility devices in our towns and cities.

We welcome the announcement of the new police mobility programme this year, which will equip police with mobile devices to allow them to access information on non-compliant drivers (e.g. disqualified drivers or learner drivers driving unaccompanied, no tax or insurance) at the roadside. I believe this technological

development will greatly enhance the enforcement of current road traffic legislation and yield significant road safety benefits.

ETSC: How does research contribute to improving road safety in Ireland?

Research is critical to the development of our evidence-based road safety interventions. Our collision data from An Garda Síochána is interrogated to provide input to the development of our media campaigns and education initiatives, and to assist the police with their targeted enforcement activity (e.g. where and when alcohol or speed related collisions are occurring). One of the key developments in the last 5 years is that we have been given access to Garda Investigation Files and Coronial Files for fatal collisions.

This provides us with detailed files describing the full circumstances of fatal collisions, including vehicle inspector reports, toxicology reports, coroner's verdicts etc. I believe we are one of the few EU road safety bodies regularly accessing coronial data for fatal collisions each year. These data have helped us refine our alcohol and speeding-based interventions, among others.

"I believe we are one of the few EU road safety bodies regularly accessing coronial data for fatal collisions each year. These data have helped us refine our alcohol and speeding-based interventions, among others."

We also use tracking research to evaluate all of our public awareness campaigns, to ensure that they are meeting objectives. Finally, collaborating with our EU partners, particularly the ETSC and IRTAD networks, allows us to learn from research and best practice in other countries.

ETSC: How is the speed problem addressed in Ireland?

The Garda mobile safety camera project provides a minimum of 7,500 enforcement hours per month, and this is a critical part of Ireland's approach to addressing speed.

In recent years, from our observational surveys of driver free speed, we have noted a striking degree of non-compliance (40-60%) with the posted speed limit on urban roads in particular. This prompted us to develop a specific campaign focusing on low-level speeding, particularly in urban areas, to address the risk posed to VRUs in these areas.

A number of years ago, a Speed Limit Review was conducted, and local authorities are currently engaged in updating speed limits within their respective areas, in line with new guidelines, to reduce inconsistencies in the application of speed limits for different areas. Furthermore, there was a commitment resulting from the Mid-Term Evaluation of the government Road Safety Strategy in 2016 to assess the feasibility of introducing an increased number of 30 km/h speed zones for the protection of VRUs.

ETSC: What has Ireland been doing to improve the safety of vulnerable road users?

Recent research conducted by the RSA on pedestrian deaths over the period 2008-2015 confirmed the continued relevance of our Drunken Pedestrians campaign, as a large proportion of pedestrians killed over this period had consumed alcohol. This campaign encourages the public to plan their journey home after a night out, and this remains a core message. A more detailed report on pedestrian deaths will be published later this year, and this report will inform the development of a new pedestrian campaign.

While cyclist deaths have remained relatively stable in recent years, the number of cyclist injuries has been increasing. Last year, we released a campaign encouraging drivers to observe a minimum passing distance of 1 metre in 50 km/h roads and 1.5 metre on higher speed roads when overtaking cyclists. In addition, we have introduced Cycle Right training for primary school children and in 2018 over 600 primary schools took part in this initiative. We have also developed a pilot training course for adult cyclists. We acknowledge that cycling infrastructure in Ireland is not sufficiently

developed, and this is a real gap in terms of protecting cyclists. However, we are working to change this. Funding under our two main cyclist infrastructure programmes has increased by around 30% this year. In particular, I am pleased to say that we are developing a safe and segregated cycle track right through the heart of Dublin city, the Liffey Cycle Route.

For motorcyclists, our main focus relates to reducing speed and drink-driving. We have a new anti-speeding campaign encouraging motorcyclists to ease off the throttle, and to think about road safety. We also conduct regular observational and survey research among motorcyclists and this has helped refine our interventions.

ETSC: Ireland currently has SPI targets on speed and seatbelt wearing in the current road safety strategy. Are you planning to introduce more SPIs and set SPI targets in the upcoming road safety strategy? If yes, how will you monitor the progress?

Ireland has a strong tradition of collecting data on road safety performance indicators. The current set of SPIs collected includes free speed, seatbelt wearing rates, helmet wearing rates for cyclists and motorcyclists, high visibility wearing rates for cyclists and motorcyclists, mobile phone misuse by drivers, the proportion of vehicles travelling with defective lights and the proportion of vehicles misusing fog lights. The current Road Safety Strategy incorporates targets for speed and seatbelt wearing rates for 2020. These targets were deliberately ambitious, 100% in all cases, in order to focus policy on these issues.

We welcomed the recent work by DG MOVE and the EU Commission to develop a set of SPIs in a number of areas of road safety. Some of these are measures we already collect but others will be new additions to this work in Ireland. The timing could not be better, as it will permit Ireland to expand the number of SPIs by including some of the new as well as existing measures in the next government Road Safety Strategy. We will certainly set targets on some of the key SPIs.

Following the Mid-Term Evaluation, we developed an approach to setting key performance indicators for actions in the Road Safety Strategy, and monitoring progress on these. So we have a template in place already that we can review and adapt for the new SPIs. Ministerial oversight and regular stakeholder meetings, which is a critical part of the monitoring process for our current strategy, will remain in place to give us the assurances that progress is made, and any challenges identified are escalated and dealt with in a timely manner.

ETSC: Ireland is now among the road safety leaders in the EU and in the world. Which countries can still be an example for Ireland when looking for inspiration for your future road safety work and why?

As mentioned earlier, we see no reason to be complacent about our current performance. I believe there is always scope to learn from our EU and international counterparts, particularly on a policy basis.

There are many countries, such as the Netherlands and Denmark, from whom we have much to learn about developing good cyclist infrastructure, and improving relationships between drivers and cyclists in shared spaces. Sweden has always been held up as an excellent example to us also, in terms of the success of their Vision Zero approach.

We have looked to Australia, and Victoria in particular for best practice in relation to drink-driving enforcement approaches. We have also looked to the UK in recent years to learn more about their successes in drink-driving rehabilitation programmes and speed awareness courses. Alcohol Interlock programmes and Intelligent Speed Assistance are two road safety technologies that we have not yet fully embraced and we are keen to learn from what has worked well in other countries.

ANNEXES

| COUNTRY | ISO CODE |
|--------------------|----------|
| Austria | AT |
| Belgium | BE |
| Bulgaria | BG |
| Croatia | HR |
| Cyprus | CY |
| The Czech Republic | CZ |
| Denmark | DK |
| Estonia | EE |
| Finland | FI |
| France | FR |
| Germany | DE |
| Greece | EL |
| Hungary | HU |
| Ireland | IE |
| Italy | IT |
| Latvia | LV |
| Lithuania | LT |
| Luxembourg | LU |
| Malta | MT |
| The Netherlands | NL |
| Poland | PL |
| Portugal | PT |
| Romania | RO |
| Slovakia | SK |
| Slovenia | SI |
| Spain | ES |
| Sweden | SE |
| United Kingdom | UK |
| Israel | IL |
| Norway | NO |
| Serbia | RS |
| Switzerland | CH |

Table 1 (Fig.1,2). Road deaths and relative change in road deaths between 2017 and 2018 and between 2010 and 2018.

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | | Fig.1 2017-2018 | | Fig.2 2010-2018 |
|-------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-------------|--------------------|-------------|--------------------|
| AT | 552 | 523 | 531 | 455 | 430 | 479 | 432 | 414 | 409 | SK | -17.0% | NO* | -48.6% |
| BE* | 850 | 884 | 827 | 764 | 745 | 762 | 670 | 615 | 590 | IL | -13.4% | EL* | -45.2% |
| BG | 776 | 656 | 601 | 601 | 660 | 708 | 708 | 682 | 611 | SI | -12.5% | LT | -43.1% |
| CY | 60 | 71 | 51 | 44 | 45 | 57 | 46 | 53 | 49 | LT | -11.5% | PT* | -35.3% |
| CZ | 802 | 773 | 742 | 654 | 688 | 737 | 611 | 577 | 656 | BG | -10.4% | SK | -35.1% |
| DE* | 3,651 | 4,009 | 3,601 | 3,340 | 3,368 | 3,459 | 3,206 | 3,177 | 3,265 | CY | -7.5% | SI | -34.1% |
| DK* | 255 | 220 | 167 | 191 | 183 | 178 | 211 | 175 | 175 | IE* | -6.4% | LV | -32.1% |
| EE | 79 | 101 | 87 | 81 | 78 | 67 | 71 | 48 | 67 | FR | -5.8% | DK* | -31.2% |
| ES*(1) | 2,478 | 2,060 | 1,903 | 1,680 | 1,688 | 1,689 | 1,810 | 1,830 | 1,806 | RS | -5.7% | IE* | -31.1% |
| FI* | 272 | 292 | 255 | 258 | 229 | 270 | 250 | 223 | 225 | EL* | -5.6% | BE* | -30.6% |
| FR | 3,992 | 3,963 | 3,653 | 3,268 | 3,384 | 3,461 | 3,477 | 3,448 | 3,248 | MT | -5.3% | CH | -28.7% |
| EL* | 1,258 | 1,141 | 988 | 879 | 795 | 793 | 824 | 731 | 690 | RO | -4.3% | ES* | -27.1% |
| HR | 426 | 418 | 393 | 368 | 308 | 348 | 307 | 331 | 317 | HR | -4.2% | PL | -26.7% |
| HU | 740 | 638 | 605 | 591 | 626 | 644 | 607 | 625 | 629 | BE* | -4.1% | AT | -25.9% |
| IE* | 212 | 186 | 163 | 188 | 193 | 162 | 185 | 156 | 146 | IT* | -2.0% | HR | -25.6% |
| IT* | 4,114 | 3,860 | 3,753 | 3,401 | 3,381 | 3,428 | 3,283 | 3,378 | 3,310 | UK | -1.7% | RO | -21.5% |
| LU | 32 | 33 | 34 | 45 | 35 | 36 | 32 | 25 | 36 | ES* | -1.3% | BG | -21.3% |
| LV | 218 | 179 | 177 | 179 | 212 | 188 | 158 | 136 | 148 | AT | -1.2% | IL* | -21.0% |
| LT | 299 | 297 | 302 | 258 | 267 | 242 | 192 | 192 | 170 | DK* | 0.0% | IT* | -19.5% |
| MT | 15 | 17 | 9 | 18 | 10 | 11 | 22 | 19 | 18 | HU | 0.6% | FR | -18.6% |
| NL(2) | 640 | 661 | 650 | 570 | 570 | 620 | 629 | 613 | 678 | PT* | 0.7% | CY | -18.3% |
| PL | 3,907 | 4,189 | 3,571 | 3,357 | 3,202 | 2,938 | 3,026 | 2,831 | 2,862 | FI* | 0.9% | CZ | -18.2% |
| PT*(3) | 937 | 891 | 718 | 637 | 638 | 593 | 563 | 602 | 606 | PL | 1.1% | FI* | -17.3% |
| RO | 2,377 | 2,018 | 2,042 | 1,861 | 1,818 | 1,893 | 1,913 | 1,951 | 1,867 | CH | 1.3% | RS* | -17.3% |
| SE | 266 | 319 | 285 | 260 | 270 | 259 | 270 | 253 | 324 | NO | 1.9% | EE | -15.2% |
| SI | 138 | 141 | 130 | 125 | 108 | 120 | 130 | 104 | 91 | DE* | 2.8% | HU | -15.0% |
| SK | 353 | 328 | 352 | 251 | 295 | 310 | 275 | 276 | 229 | LV | 8.8% | DE* | -10.6% |
| UK(4) | 1,905 | 1,960 | 1,802 | 1,769 | 1,854 | 1,804 | 1,860 | 1,856 | 1,825 | NL | 10.6% | UK | -4.2% |
| CH | 327 | 320 | 339 | 269 | 243 | 253 | 216 | 230 | 233 | CZ | 13.7% | NL | 5.9% |
| IL* | 352 | 341 | 263 | 277 | 279 | 322 | 335 | 321 | 278 | SE | 28.1% | LU | 12.5% |
| NO* | 210 | 168 | 145 | 187 | 147 | 117 | 135 | 106 | 108 | EE | 39.6% | MT | 20.0% |
| RS* | 660 | 731 | 688 | 650 | 536 | 599 | 607 | 579 | 546 | LU | 44.0% | SE | 21.8% |
| EU28 | 31,604 | 30,828 | 28,392 | 26,093 | 26,080 | 26,256 | 25,768 | 25,321 | 25,047 | EU28 | -1.0% | EU28 | -20.7% |

Source: national statistics provided by the PIN panellists for each country.

* National provisional estimates used for 2018, as the final figures for 2018 were not yet available at the time of going to print.

(1) ES - decrease in 2011 in Spain is partly due to change in reporting methods. Like Portugal, prior to 2010 the number of people killed are people killed on the spot multiplied by a coefficient. Since 2011 Spain is able to report data according to the EU common definition of any person killed immediately or dying within 30 days as a result of an injury accident by matching police and national deaths register.

(2) NL - figures have been corrected for police underreporting. In the Netherlands, the reported number of deaths are checked by Statistics Netherlands (CBS) and compared individually to the death certificates and Court files of unnatural death.

(3) PT - increases in Portugal in 2010 and 2011 are partly due to change in reporting methods. Like Spain prior to 2010 the number of people killed are people killed on the spot multiplied by a coefficient of 1.14. Since 2010 Portugal is able to collect deaths according to the EU common definition of any person killed immediately or dying within 30 days as a result of an injury accident. The number of people killed in 2010 would have been 845 in 2010, 785 in 2011 and 653 in 2012 using the old methodology.

(4) UK - 2018 estimate is based on GB provisional total for the year ending June 2018 (1770 deaths) and the provisional data for Northern Ireland for the calendar year 2018 (55 deaths).

Table 2 (Fig.6,10). Road deaths and relative change in road deaths between 2001 and 2018 and estimated average relative annual change 2010-2018.

| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | Fig,6 2001- 2018 | Fig,10 Annual average change in the number of road deaths over the period 2010-2018 | | | |
|-------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|------------------------|---|-------------|--------------|--------------------------|
| AT | 958 | 956 | 931 | 878 | 768 | 730 | 691 | 679 | 633 | 552 | 523 | 531 | 455 | 430 | 479 | 432 | 414 | 409 | LT | -75.9% | AT | -3.7% | Excluded from the Fig.10 |
| BE* | 1,486 | 1,355 | 1,213 | 1,162 | 1,131 | 1,106 | 1,094 | 980 | 956 | 850 | 884 | 827 | 764 | 745 | 762 | 670 | 615 | 590 | LV | -73.1% | BE* | -4.6% | 2010-2017 |
| BG | 1,011 | 959 | 960 | 943 | 957 | 1,043 | 1,006 | 1,061 | 901 | 776 | 656 | 601 | 601 | 660 | 708 | 708 | 682 | 611 | SI | -67.3% | BG | -0.6% | |
| CY | 98 | 94 | 97 | 117 | 102 | 86 | 89 | 82 | 71 | 60 | 71 | 51 | 44 | 45 | 57 | 46 | 53 | 49 | ES* | -67.3% | CY | -2.7% | |
| CZ | 1,334 | 1,431 | 1,447 | 1,382 | 1,286 | 1,063 | 1,222 | 1,076 | 901 | 802 | 773 | 742 | 654 | 688 | 737 | 611 | 577 | 656 | EE | -66.3% | CZ | -3.2% | |
| DE* | 6,977 | 6,842 | 6,613 | 5,842 | 5,361 | 5,091 | 4,949 | 4,477 | 4,152 | 3,651 | 4,009 | 3,601 | 3,340 | 3,368 | 3,459 | 3,206 | 3,177 | 3,265 | IE* | -64.5% | DE* | -2.2% | |
| DK* | 431 | 463 | 432 | 369 | 331 | 306 | 406 | 406 | 303 | 255 | 220 | 167 | 191 | 183 | 178 | 211 | 175 | 175 | PT | -63.7% | DK | -3.2% | 2010-2017 |
| EE | 199 | 223 | 164 | 170 | 169 | 204 | 196 | 132 | 100 | 79 | 101 | 87 | 81 | 78 | 67 | 71 | 48 | 67 | SK | -63.4% | EE | -5.6% | Excluded from the Fig.10 |
| ES*(1) | 5,517 | 5,347 | 5,399 | 4,741 | 4,442 | 4,104 | 3,823 | 3,100 | 2,714 | 2,478 | 2,060 | 1,903 | 1,680 | 1,688 | 1,689 | 1,810 | 1,830 | 1,806 | EL* | -63.3% | ES | -3.6% | 2010-2017 |
| FI* | 433 | 415 | 379 | 375 | 379 | 336 | 380 | 344 | 279 | 272 | 292 | 255 | 258 | 229 | 270 | 250 | 223 | 225 | NO* | -60.7% | FI | -2.6% | Excluded from the Fig.10 |
| FR | 8,253 | 7,742 | 6,126 | 5,593 | 5,318 | 4,709 | 4,620 | 4,275 | 4,273 | 3,992 | 3,963 | 3,653 | 3,268 | 3,384 | 3,461 | 3,477 | 3,448 | 3,248 | FR | -60.6% | FR | -2.1% | 2010-2017 |
| EL* | 1,880 | 1,634 | 1,605 | 1,670 | 1,658 | 1,657 | 1,612 | 1,553 | 1,456 | 1,258 | 1,141 | 988 | 879 | 795 | 793 | 824 | 731 | 690 | BE* | -60.3% | EL | -6.8% | |
| HR | 647 | 627 | 701 | 608 | 597 | 614 | 619 | 664 | 548 | 426 | 418 | 393 | 368 | 308 | 348 | 307 | 331 | 317 | DK* | -59.4% | HR | -4.0% | |
| HU | 1,239 | 1,429 | 1,326 | 1,296 | 1,278 | 1,303 | 1,232 | 996 | 822 | 740 | 638 | 605 | 591 | 626 | 644 | 607 | 625 | 629 | AT | -57.3% | HU | -1.0% | |
| IE* | 411 | 376 | 335 | 374 | 396 | 365 | 338 | 279 | 238 | 212 | 186 | 163 | 188 | 193 | 162 | 185 | 156 | 146 | RS* | -57.2% | IE | -3.1% | Excluded from the Fig.10 |
| IT* | 7,096 | 6,980 | 6,563 | 6,122 | 5,818 | 5,669 | 5,131 | 4,725 | 4,237 | 4,114 | 3,860 | 3,753 | 3,401 | 3,381 | 3,428 | 3,283 | 3,378 | 3,310 | CH | -57.2% | IT | -2.5% | Excluded from the Fig.10 |
| LU | 70 | 62 | 53 | 50 | 47 | 43 | 45 | 35 | 48 | 32 | 33 | 34 | 45 | 35 | 36 | 32 | 25 | 36 | IT* | -53.4% | LU | -2.3% | 2010-2017 |
| LV | 558 | 559 | 532 | 516 | 442 | 407 | 419 | 316 | 254 | 218 | 179 | 177 | 179 | 212 | 188 | 158 | 136 | 148 | DE* | -53.2% | LV | -4.2% | |
| LT | 706 | 697 | 709 | 752 | 773 | 760 | 740 | 499 | 370 | 299 | 297 | 302 | 258 | 267 | 242 | 192 | 192 | 170 | HR | -49.2% | LT | -7.3% | Excluded from the Fig.10 |
| MT | 16 | 16 | 16 | 13 | 16 | 10 | 14 | 15 | 21 | 15 | 17 | 9 | 18 | 10 | 11 | 22 | 19 | 18 | CZ | -50.8% | MT | 4.0% | |
| NL(3) | 1,083 | 1,069 | 1,088 | 881 | 817 | 811 | 791 | 750 | 720 | 640 | 661 | 650 | 570 | 570 | 620 | 629 | 613 | 678 | CY | -50.0% | NL | -0.8% | 2010-2017 |
| PL | 5,534 | 5,827 | 5,640 | 5,712 | 5,444 | 5,243 | 5,583 | 5,437 | 4,572 | 3,907 | 4,189 | 3,571 | 3,357 | 3,202 | 2,938 | 3,026 | 2831 | 2862 | UK | -49.3% | PL | -4.7% | |
| PT(4) | 1,670 | 1,668 | 1,542 | 1,294 | 1,247 | 969 | 974 | 885 | 840 | 937 | 891 | 718 | 637 | 638 | 593 | 563 | 602 | 606 | HU | -49.2% | PT | -5.6% | |
| RO | 2,450 | 2,412 | 2,229 | 2,444 | 2,629 | 2,587 | 2,800 | 3,065 | 2,797 | 2,377 | 2,018 | 2,042 | 1,861 | 1,818 | 1,893 | 1,913 | 1,951 | 1,867 | IL | -48.7% | RO | -1.9% | |
| SE(5) | 534 | 515 | 512 | 463 | 423 | 428 | 454 | 380 | 341 | 266 | 319 | 285 | 260 | 270 | 259 | 270 | 253 | 324 | LU | -48.6% | SE | 0.0% | |
| SI | 278 | 269 | 242 | 274 | 257 | 262 | 293 | 214 | 171 | 138 | 141 | 130 | 125 | 108 | 120 | 130 | 104 | 91 | PL | -48.3% | SI | -4.3% | |
| SK | 625 | 626 | 653 | 608 | 600 | 608 | 661 | 606 | 385 | 353 | 328 | 352 | 251 | 295 | 310 | 275 | 276 | 229 | FI* | -48.0% | SK | -3.3% | 2010-2017 |
| UK(2) | 3,598 | 3,581 | 3,658 | 3,368 | 3,337 | 3,300 | 3,056 | 2,718 | 2,337 | 1,905 | 1,960 | 1,802 | 1,769 | 1,854 | 1,804 | 1,860 | 1,856 | 1,825 | BG | -39.6% | UK | -0.5% | 2010-2017 |
| CH | 544 | 513 | 546 | 510 | 409 | 370 | 384 | 357 | 349 | 327 | 320 | 339 | 269 | 243 | 253 | 216 | 230 | 233 | SE | -39.3% | CH | -5.4% | |
| IL* | 542 | 525 | 445 | 467 | 437 | 405 | 382 | 412 | 314 | 352 | 341 | 263 | 277 | 279 | 322 | 335 | 321 | 278 | NL | -37.4% | IL | -0.8% | |
| NO* | 275 | 310 | 280 | 258 | 224 | 242 | 233 | 255 | 212 | 210 | 168 | 145 | 187 | 147 | 117 | 135 | 106 | 108 | RO | -23.8% | NO | -7.7% | |
| RS* | 1,275 | 854 | 868 | 960 | 843 | 911 | 968 | 905 | 809 | 660 | 731 | 688 | 650 | 536 | 599 | 607 | 579 | 546 | MT | 12.5% | RS | -2.9% | 2010-2017 |
| EU28 | 55,092 | 54,174 | 51,165 | 48,017 | 46,023 | 43,814 | 43,238 | 39,749 | 35,440 | 31,604 | 30,828 | 28,392 | 26,093 | 26,080 | 26,256 | 25,768 | 25,321 | 25,047 | EU28 | -54.5% | EU24 | -2.8% | |

Source: national statistics provided by the PIN panellists for each country.

* National provisional estimates used for 2018, as the final figures for 2018 were not yet available at the time of going to print.

(1) ES - decrease in 2011 in Spain is partly due to change in reporting methods. Like Portugal, prior to 2010 the number of people killed are people killed on the spot multiplied by a coefficient.

Since 2011 Spain is able to report data according to the EU common definition of any person killed immediately or dying within 30 days as a result of an injury accident by matching police and national deaths register.

(2) UK - 2018 estimate is based on GB provisional total for the year ending June 2018 (1770 deaths) and the provisional data for Northern Ireland for the calendar year 2018 (55 deaths).

(3) NL - figures have been corrected for police underreporting. In the Netherlands, the reported number of deaths is checked by Statistics Netherlands (CBS) and compared individually to the death certificates and Court files of unnatural death.

(4) PT - increases in Portugal in 2010 and 2011 are partly due to change in reporting methods. Like Spain prior to 2010 the number of people killed are people killed on the spot multiplied by a coefficient of 1.14. Since 2010 Portugal is able to collect deaths according to the EU common definition of any person killed immediately or dying within 30 days as a result of an injury accident. The number of people killed in 2010 would have been 845 in 2010, 785 in 2011 and 653 in 2012 using the old methodology.

(5) SE - the definition of road deaths changed in 2010 to exclude suicides. The time series was adjusted so figures for previous years exclude suicides as well.

Table 3 (Fig.7). Road deaths per million inhabitants in 2018 and 2010.

| | 2018 | | | 2010 | | |
|-------------------|---------------|--------------------|----------------------------|---------------|--------------------|----------------------------|
| | Road deaths | Inhabitants | Deaths per mln inhabitants | Road deaths | Inhabitants | Deaths per mln inhabitants |
| NO | 108 | 5,295,619 | 20 | 210 | 4,858,199 | 43 |
| CH | 233 | 8,484,130 | 27 | 327 | 7,785,806 | 42 |
| UK ⁽¹⁾ | 1,825 | 66,273,576 | 28 | 1,905 | 62,510,197 | 30 |
| IE* | 146 | 4,857,000 | 30 | 212 | 4,549,428 | 47 |
| DK* | 175 | 5,781,190 | 30 | 255 | 5,534,738 | 46 |
| IL* | 278 | 8,972,000 | 31 | 352 | 7,695,100 | 46 |
| SE | 324 | 10,120,242 | 32 | 266 | 9,340,682 | 28 |
| MT | 18 | 475,701 | 38 | 15 | 414,027 | 36 |
| ES* | 1,806 | 46,658,447 | 39 | 2,478 | 46,486,619 | 53 |
| DE* | 3,265 | 82,792,351 | 39 | 3,651 | 81,802,257 | 45 |
| NL | 678 | 17,181,084 | 39 | 640 | 16,574,989 | 39 |
| FI* | 225 | 5,513,130 | 41 | 272 | 5,351,427 | 51 |
| SK | 229 | 5,443,120 | 42 | 353 | 5,390,410 | 65 |
| SI | 91 | 2,066,880 | 44 | 138 | 2,046,976 | 67 |
| AT* | 409 | 8,822,267 | 46 | 552 | 8,375,290 | 66 |
| FR ⁽²⁾ | 3,259 | 64,812,000 | 50 | 3,992 | 62,765,235 | 64 |
| EE | 67 | 1,319,133 | 51 | 79 | 1,333,290 | 59 |
| BE* | 590 | 11,398,589 | 52 | 841 | 10,839,905 | 78 |
| IT* | 3,310 | 60,483,973 | 55 | 4,114 | 59,190,143 | 70 |
| CY | 49 | 864,236 | 57 | 60 | 819,140 | 73 |
| LU | 36 | 602,005 | 60 | 32 | 502,066 | 64 |
| LT | 170 | 2,808,901 | 61 | 299 | 3,141,976 | 95 |
| PT ⁽²⁾ | 606 | 9,792,797 | 62 | 937 | 10,573,479 | 89 |
| CZ | 656 | 10,610,055 | 62 | 802 | 10,462,088 | 77 |
| EL* | 690 | 10,741,165 | 64 | 1,258 | 11,183,516 | 112 |
| HU | 629 | 9,778,371 | 64 | 740 | 10,014,324 | 74 |
| PL | 2,862 | 38,433,558 | 74 | 3,907 | 38,167,329 | 102 |
| LV | 148 | 1,934,379 | 77 | 218 | 2,120,504 | 103 |
| HR | 317 | 4,105,493 | 77 | 426 | 4,302,847 | 99 |
| RS | 546 | 7,001,444 | 78 | 660 | 7,306,677 | 90 |
| BG | 611 | 7,050,034 | 87 | 776 | 7,421,766 | 105 |
| RO | 1,867 | 19,530,631 | 96 | 2,377 | 20,294,683 | 117 |
| EU 28 | 25,047 | 510,250,308 | 49 | 31,595 | 503,402,952 | 63 |

Source: national statistics provided by the PIN panellists for each country, completed with Eurostat for population figures.

*National provisional estimates used for 2018, as the final figures for 2018 were not yet available at the time of going to print.

⁽¹⁾ UK - 2018 estimate is based on GB provisional total for the year ending June 2018 (1770 deaths) and the provisional data for Northern Ireland for the calendar year 2018 (55 deaths).

⁽²⁾ PT - continents population data for 2017 as data for 2018 were not available at the time of going to print.

⁽³⁾ FR - continental population data.

Table 4 (Fig.8). Road deaths per billion vehicle-kilometres over three recent years.
Average of the last three years available.

| | Road deaths three years average | Average distance travelled (in millions) | Deaths per billion vehicle-km ⁽¹⁾ | Time period covered |
|-------------------|---------------------------------|--|--|---------------------|
| NO | 133 | 44,397 | 3.0 | 2014-2016 |
| CH | 226 | 67,883 | 3.3 | 2016-2018 |
| SE | 282 | 83,794 | 3.4 | 2016-2018 |
| GB ⁽²⁾ | 1,785 | 524,567 | 3.4 | 2016-2018 |
| IE | 168 | 47,611 | 3.5 | 2015-2017 |
| DK* | 187 | 51,027 | 3.7 | 2016-2018 |
| DE | 3,281 | 768,467 | 4.3 | 2015-2017 |
| FI | 250 | 53,362 | 4.7 | 2014-2016 |
| NL | 621 | 132,414 | 4.7 | 2015-2017 |
| AT | 442 | 84,887 | 5.2 | 2015-2017 |
| IL | 326 | 57,214 | 5.7 | 2015-2017 |
| EE | 62 | 10,798 | 5.7 | 2016-2018 |
| FR | 3,462 | 596,833 | 5.8 | 2015-2017 |
| IT | 3,363 | 514,865 | 6.5 | 2015-2017 |
| MT | 19 | 2,820 | 6.6 | 2016-2017 |
| SI | 119 | 18,034 | 6.6 | 2014-2016 |
| BE | 682 | 101,718 | 6.7 | 2015-2017 |
| PT* | 590 | 69,234 | 8.5 | 2016-2018 |
| CZ† | 642 | 52,941 | 10.1 | 2015-2017 |
| LV | 161 | 13,264 | 12.1 | 2015-2017 |
| HR | 318 | 25,145 | 12.7 | 2016-2018 |
| PL | 3,166 | 217,315 | 14.6 | 2013-2015 |

| | | | | |
|-------------|---------------|------------------|------------|--|
| EU19 | 19,599 | 3,369,096 | 5.8 | |
|-------------|---------------|------------------|------------|--|

| | | | | |
|-----|-----|-----|--|--|
| BG | n/a | n/a | | |
| CY | n/a | n/a | | |
| ES* | n/a | n/a | | |
| EL* | n/a | n/a | | |
| HU | n/a | n/a | | |
| LU | n/a | n/a | | |
| LT | n/a | n/a | | |
| RO | n/a | n/a | | |
| SK | n/a | n/a | | |
| RS | n/a | n/a | | |

EU19 average: EU28 excluding BG, CY, ES, EL, HU, LU, LT, SK and RO due to lack of data on vehicle distance travelled.

* National provisional estimates used for 2018, as the final figures for 2018 were not yet available at the time of going to print.

⁽¹⁾ Data provided by PIN panellists. Member States are using different methods for estimating the numbers of distance travelled.

⁽²⁾ GB - data for Great Britain is used instead of the UK as since 2014 data on distance travelled in Northern Ireland are not available.

CZ† data on the number of vehicle-km is estimated by traffic counting only for motorways and roads of 1st, 2nd and 3rd class category, local roads where 17% or all road deaths occur are not counted. Therefore, the number of road deaths per km/ travelled is calculated for 83% of all road deaths.

Table 5 (Fig.9,10). Number of seriously injured according to national definition (see table 6 for definition) and relative change in serious injuries between 2010-2018 and annual average relative change over the period 2010-2018.

Some countries are taking the lead in collecting number of people seriously injured as MAIS3+.

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| AT | 6,370 | 6,397 | 8,017 | 7,344 | 7,434 | 7,486 | 7,566 | 7,664 | |
| AT MAIS3+ | 1,516 | 1,522 | 1,554 | 1,405 | 1,410 | 1,309 | 1,389 | | |
| BE* | 5,606 | 5,739 | 4,736 | 4,581 | 4,484 | 4,181 | 4,095 | 3,757 | |
| BE MAIS3+ | | | | | 3,979 | | | | |
| BG | 8,078 | 8,301 | 8,193 | 8,776 | 8,639 | 8,971 | 9,374 | 8,680 | 8,466 |
| BG MAIS3+ | 2,451 | 2,366 | 2,204 | 2,034 | 2,175 | 2,295 | 2,503 | 1,943 | 1,988 |
| CY* | 586 | 561 | 551 | 407 | 467 | 377 | 406 | 388 | 348 |
| CY MAIS3+ | | | | | 83 | | | | |
| CZ | 2,788 | 3,045 | 2,934 | 2,721 | 2,714 | 2,487 | 2,530 | 2,286 | 2,395 |
| DE* | 62,620 | 68,985 | 66,279 | 64,045 | 67,709 | 67,706 | 67,426 | 66,513 | 67,913 |
| DE MAIS3+ | | | | | 14,645 | | | | |
| DK | 2,063 | 2,172 | 1,952 | 1,891 | 1,798 | 1,780 | 1,797 | 1,756 | |
| EE* | | | 476 | 501 | 455 | 449 | 469 | 475 | 460 |
| ES* | 11,995 | 11,347 | 10,444 | 10,086 | 9,574 | 9,495 | 9,755 | 9,546 | |
| ES MAIS3+ | 7,331 | 7,420 | 7,047 | 6,613 | 6,343 | 6,955 | | | |
| FI ⁽²⁾ | 1,326 | 1,308 | | | 519 | 477 | 460 | 409 | |
| FR* | 30,393 | 29,679 | 27,142 | 25,966 | 26,635 | 26,595 | 27,187 | 27,732 | |
| FR MAIS3+ | 26,293 | 25,964 | 23,647 | 22,400 | 23,783 | 23,463 | 24,601 | | |
| EL* | 1,709 | 1,626 | 1,399 | 1,212 | 1,016 | 999 | 879 | 706 | 748 |
| HR | 3,182 | 3,409 | 3,049 | 2,831 | 2,675 | 2,822 | 2,746 | 2,776 | 2,731 |
| HU | 5,671 | 5,152 | 4,921 | 5,369 | 5,331 | 5,575 | 5,539 | 5,627 | 5,496 |
| IE* | 561 | 472 | 474 | 508 | 758 | 826 | 966 | | |
| IE MAIS3+ | | | | | 343 | | | | |
| IT MAIS 3+ | | | 13,112 | 12,899 | 14,943 | 15,901 | 17,324 | 17,309 | |
| LU* | 266 | 317 | 339 | 316 | 245 | 319 | 249 | 256 | |
| LU MAIS3+ | | | | | | 69 | 69 | 43 | |
| LV* | 569 | 531 | 493 | 452 | 434 | 479 | 525 | 496 | 542 |
| LT | | | | | | 142 | 96 | 52 | 81 |
| LT MAIS3+ | | | | | 128 | 142 | 66 | 124 | |
| MT | 211 | 235 | 300 | 265 | 292 | 306 | 294 | 304 | 317 |
| NL | 19,100 | 19,700 | 19,500 | 18,800 | 20,700 | 21,300 | 21,400 | 20,800 | |
| NL MAIS3+ | 5,700 | 6,100 | 6,400 | 6,500 | 7,500 | 7,800 | 8,100 | 8,500 | |
| PL | 11,491 | 12,585 | 12,049 | 11,669 | 11,696 | 11,200 | 12,109 | 11,103 | 10,963 |
| PL MAIS3+ | | | | 1,859 | 2,263 | | | | |
| PT* | 2,475 | 2,265 | 1,941 | 1,946 | 2,010 | 2,148 | 1,999 | 2,117 | 1,974 |
| PT MAIS3+ | 2,290 | 2,368 | 2,111 | 2,074 | 2,055 | 2,171 | | | |
| RO | 8,509 | 8,768 | 8,860 | 8,156 | 8,122 | 9,057 | 8,285 | 8,181 | 8,144 |
| SE | 4,662 | 4,518 | 4,450 | 4,826 | 4,889 | 4,313 | 4,472 | 4,371 | 4,200 |
| SE MAIS3+ | 1,217 | 1,102 | 1,032 | 1,091 | 1,159 | 906 | 962 | 903 | 921 |
| SI | 880 | 919 | 848 | 708 | 826 | 926 | 850 | 851 | 821 |
| SK | 1,207 | 1,168 | 1,122 | 1,086 | 1,057 | 1,121 | 1,057 | 1,127 | |
| UK* | 23,552 | 23,947 | 23,834 | 22,377 | 23,517 | 22,855 | 24,929 | 25,609 | |
| UK MAIS3+ | 4,683 | 4,949 | 5,160 | 5,236 | 5,741 | 6,092 | 6,547 | | |
| CH* | 4,458 | 4,437 | 4,202 | 4,129 | 4,043 | 3,830 | 3,785 | 3,654 | 3,873 |
| CH MAIS3+ | | 3,428 | 3,262 | 3,204 | 2,899 | 2,887 | 2,929 | | |
| IL* | 1,683 | 1,340 | 1,611 | 1,624 | 1,562 | 1,796 | 1,845 | 2,067 | 1,868 |
| IL MAIS3+ | | | | 1,865 | 1,816 | 2,003 | 2,187 | 2,089 | |
| NO | 714 | 679 | 639 | 640 | 674 | 682 | 656 | 665 | |
| NO | 3,883 | 3,777 | 3,544 | 3,422 | 3,275 | 3,448 | 3,362 | 3,504 | 3,338 |
| EU 23 | 215,022 | 222,316 | 214,303 | 206,839 | 213,478 | 213,773 | 216,904 | 214,087 | 214,940 |

| | Fig.9 2010-2018 | Time period | Fig. 10 Annual average change in the number serious injuries over the period 2010-2018 ⁽¹⁾ |
|--------------|-----------------|-------------|---|
| EL* | -56.2% | | AT* 2.3% Excluded from Fig.10 |
| CY* | -40.6% | | BE -5.6% 2010-2017 |
| BE* | -33.0% | 2010-2017 | BG -0.4% |
| ES* | -20.4% | 2010-2017 | CY -6.3% |
| PT* | -20.2% | | CZ -3.0% |
| DK | -14.9% | 2010-2017 | DE 0.5% |
| HR | -14.2% | | DK -2.8% 2010-2017 |
| CZ | -14.1% | | EE n/a Excluded from Fig.10 |
| RS* | -14.0% | | ES -3.2% 2010-2017 |
| CH* | -13.1% | | FI n/a Excluded from Fig.10 |
| SE | -9.9% | | FR -1.3% 2010-2017 |
| FR* | -8.8% | 2010-2017 | EL -10.9% |
| NO | -6.9% | 2010-2017 | HR -2.4% |
| SI | -6.7% | | HU* 0.7% |
| SK | -6.6% | 2010-2017 | IE** 12.2% Excluded from Fig.10 |
| LV* | -4.7% | | IT n/a Excluded from Fig.10 |
| PL | -4.6% | | LU -2.3% 2010-2017 |
| RO | -4.3% | | LV -0.4% |
| LU* | -3.8% | 2010-2017 | LT n/a Excluded from Fig.10 |
| EE* | -3.4% | 2012-2018 | MT 4.3% |
| HU | -3.1% | | NL* 1.6% 2010-2017 |
| BG | 4.8% | | PL -1.0% |
| DE* | 8.5% | | PT -1.6% |
| UK* | 8.7% | 2010-2017 | RO -0.7% |
| NL† | 8.9% | 2010-2017 | SE -1.0% |
| IL* | 11.0% | | SI -0.4% |
| MT* | 50.2% | | SK -1.2% 2010-2017 |
| EU 24 | -0.1% | | UK* 0.8% 2010-2017 |
| | | | GB 1.2% |
| | | | CH -2.4% |
| | | | IL 3.5% |
| | | | NO -0.5% 2010-2017 |
| | | | RS -1.5% |
| | | | EU 24 -0.1% |

EU24: Seriously injured according to each country national definition.

* Similar national serious injury definition.

EU24: EU28 excluding EE, FI, IT and LT due to insufficient data.

EU24: seriously injured according to each country national definition.

⁽¹⁾The relative change shown in Fig.9 is calculated only from the numbers of serious injuries in 2010 and 2018 and comparison between countries can be misleading if these two numbers are unusually high or low in different ways in the countries compared. To assist such comparison, the average annual percentage change shown in Fig.10 has been estimated for each country from its numbers of serious injuries in each of the 9 years 2010-2018.

⁽²⁾ FI - the 2010-2011 figures are not comparable with years 2014 onwards because different tools have been used in conversion from ICD-codes to MAIS.

Table 6. Current national definitions of seriously injured person in a road collision as used in Fig.9 and Fig.10.

National definition of a seriously injured person (before introducing MAIS 3+ definition) in a road collision corresponding to the data in Table 5

| | |
|----|---|
| AT | Whether an injury is severe or slight is determined by §84 of the Austrian criminal code. A severe injury is one that causes a health problem or occupational disability longer than 24 days, or one that "causes personal difficulty". Police records. As of 1.1.2012, only 2 instead of 3 degrees of severities, slight, degree unknown, severe. Therefore and because of lower underreporting due to the new police recording system, the figure increased substantially |
| BE | Hospitalised more than 24 hours. But in practice no communication between police and hospitals so in most cases allocation is made by the police without feedback from the hospitals. (Police records) |
| BG | The level of "body damage" is defined in the Penalty code. There are 3 – light, medium and high levels of body damage. Prior to introducing MAIS in the Police records the first level is "light injured", the second and third is "heavy injured". The medium and high level corresponded to MAIS 3+ levels, as it is defined in the CADaS Glossary. |
| CY | Hospitalised for at least 24 hours. Police records. |
| CZ | Determined by the treating doctor, if serious health harm (specified approximately along the types by the law) occurs. Police records. |
| DE | Hospitalised for at least 24 hours. Police records. |
| DK | All injuries except "slight". Police records. |
| EE | Hospitalised for at least 24 hours. Hospital data is used to find out how long the person (involved in an accident according to the police data) was hospitalised. |
| ES | Hospitalised for at least 24 hours. Police records. |
| FI | Serious injury in official statistics is defined as MAIS3+ (AAAM, Association for the Advancement of Automotive Medicine). The number of seriously injured MAIS3+ is formed by combining the official road accident participant statistics maintained by Statistics Finland and the Hospital Discharge Register (HILMO), using personal identity numbers as the link. ICD-10 codes from hospital data are converted to MAIS. |
| FR | Until 2004: hospitalised for at least 6 days. From 2005: hospitalised for at least 24 hours. Police records. People injured are asked to go to the police to fill in information about the collision, in particular if they spent at least 24 hours as in-patient. |
| EL | Injury and injury severity are estimated by police officers. It is presumed that all persons who spent at least one night at the hospital are recorded as seriously injured persons. Police records. |
| HR | ICD-International Classification of Diseases - used by medical staff exclusively, after admission to the hospital. |
| HU | Serious injury which necessitates hospitalisation for more than 48 hours within seven days after occurrence or caused fracture, except for finger, toe, nose fractures; or caused cut wounds, which resulted in serious bleeding or nerve, muscle or tendon injuries; or caused injury of inner organs; or caused burn of second or third degree or burn affecting more than 5% of body surface. |
| IE | Hospitalised for at least 24 hours as an in-patient, or any of the following injuries whether or not detained in hospital: fractures, concussion, internal injuries, crushing, severe cuts and lacerations, several general shock requiring medical treatment. |
| IT | Separate statistics on serious and slight injuries are n/a in the Road accidents dataset. Despite that, Italy calculated the number of seriously injured according to EU recommendations (MAIS 3+) and using data based on hospitals discharge records. |
| LU | Hospitalised for at least 24 hours as in-patient. Police records. |
| LV | From 2004: hospitalised more than 24 hours as in-patient. Police records. |
| LT | Seriously injured person loses more than 30 % of his/her working capacity or/and his or her body is being incurably mutilated. |
| MT | An injury accident is classified as 'Serious' injury (referred to in Malta accident statistics as 'Grievous' injury) if the person does not recover his/her previous health condition with 30 days. Police records. |
| NL | Definition: "A serious road injury is a road crash casualty who has been admitted to hospital with a minimum MAIS (Maximum Abbreviated Injury Score) injury severity of at least 2 on a scale of 6, and who has not died within 30 days from the consequences of the crash." Method: MAIS=2 or higher. Linked Police-Hospital records + remainder file + estimate of unobserved C/RC. MAIS3+ is a subset of MAIS2+" |

| | |
|----|---|
| PL | A person who sustained a serious disability, a serious incurable disease or a chronic life threatening disease, permanent mental disease, complete or substantial permanent incapacity to work in their current occupation or a permanent or substantial scarring or disfiguration of the body; the definition also includes persons who have suffered other injuries incapacitating their bodies or causing ill health for longer than 7 days". Police records. |
| PT | Hospitalised for at least 24 hours. Police records. |
| RO | Person seriously injured in traffic accident, person who has suffered: a) loss of a sense or organ or cessation of their operation; b) permanent physical or mental disability; c) a serious and permanent aesthetic wound; d) an abortion; e) fractures, except for nasal or zygomatic bone fractures, fingers, clavculus, monofocal fractures of 1-3 ribs or 1-3 tooth pulsations, if they did not require hospitalization for more than 24 hours; f) shock, concussion, internal injuries, crushing, severe cuts and tears or polytrauma that required hospitalization for more than 24 hours; g) abrasions, sprains, contusions or other such injuries that required hospitalization for more than two working days. Serious shock, or any other injury which leads to death more than 30 days after the collision. Police records. |
| SE | The definition of seriously injured was updated in 2007. A serious injury is now defined as a health loss following a traffic injury reflecting that a person does not recover their previous health condition within a reasonable amount of time. This series is used in the national annual follow up and there is a goal for 2020 (-25 % since 2007). Hospital records. |
| SI | Any injured persons who were involved in a road traffic accident and sustained injuries due to which their lives were in danger or due to which their health was temporarily or permanently damaged or due to which they were temporarily unable to perform any work or their ability to work was permanently reduced (Penal Code of the Republic of Slovenia). Police records. |
| SK | Serious bodily harm or serious disease, which is a) mutilation, b) loss or substantial impairment of work capacity, c) paralysis of a limb, d) loss or substantial impairment of the function of a sensory organ, e) damage to an important organ, f) disfigurement, g) inducing abortion or death of a foetus, h) agonising suffering, or i) health impairment of longer duration. Health impairment of longer duration is an impairment, which objectively requires treatment and possibly involves work incapacity of not less than forty-two calendar days, during which it seriously affects the habitual way of life of the injured party. |
| UK | Hospitalised for at least 24 hours or any of the following injuries whether or not they are detained in hospital: fractures, concussion, internal injuries, crushing, burns (excluding friction burns), severe cuts and lacerations, severe general shock. Since 2016, changes in severity reporting systems for a large number of police forces mean that serious injury figures as reported to the police are not comparable with earlier years. These systems use a list of injuries which are automatically mapped to severity, rather than relying on the judgment of the police officer. |
| CH | Up to 2014: Hospitalised for at least 24 hours or if the injury prevented the person from doing its daily activity for 24 hours. Since 2015: Hospitalised for at least 24 hours. Police records. Further comments: In Switzerland, injury severity is still assessed by means of a simple definition by the police force present at the scene. Nothing is known of the type and long-term outcome of injuries. In order to improve the assessment of injury severity a first step was taken: since January 2015 the definition of injury severity was further specified and the police corps were trained. Also a new category "life-threatening injury" was introduced. For a further standardization the severity scale was linked to the NACA-Codes, used by all emergency services in Switzerland |
| IL | Hospitalised more than 24 hours as in-patient. Police records. |
| NO | Very serious injury: Any injury that is life-threatening or results in permanent impairment. Serious injury: Any injury from a list of specific injuries; these would normally require admission to hospital as an in-patient. Police records. |
| RS | Using of the ICD-International Classification of Diseases. Categorization of an injury as a "serious injury" is made on the basis of expert assessment given by doctors during admission to hospital, during hospitalization or after the hospitalization. The Republic of Serbia has not yet adopted a definition for serious injury. Police records. |

Table 7. Countries' progress in collecting data on seriously injured based as MAIS3+.

| | |
|----|---|
| AT | The KFV carried out a feasibility study on MAIS3+ assessment on behalf of the Austrian Transport Ministry (bmvit) in 2014 and 2015. The study covered two methods to estimate the number of serious road injuries: a) application of a (hospital data based) correction factor to the police reported number of serious injuries, and b) use hospital data alone to arrive at an estimate for serious injuries. |
| BE | We are finetuning our procedure of MAIS3+ estimation on the basis of hospital discharge data (coverage: whole of Belgium) and the conversion of (all) diagnoses from ICD-9-CM and ICD-10-BE to AIS. We will be able to provide breakdowns according to age, road user type, gender, month, year, accident type. We use option one (correction factors applied to police data) and option two (use of hospital data) that are proposed by the European Commission. |
| BG | The only source is Police records. |
| CY | Data based on MAIS for 2017 was calculated last year, but an error was identified and a new calculation is in process, for 2017 and 2018. |
| CZ | In 2017 first preparation steps for MAIS3+ police registration have been done. |
| DE | An MAIS3+ injured persons estimation based on GIDAS data, data from the German Trauma Register and data from the official accident statistics is being calculated by Bast. |
| DK | No systematic linkage between police and hospital data. Denmark is working on a process to convert ICD diagnose codes into AIS and MAIS. |
| EE | ICD-10 diagnose info exists, technologically ready to link accident data with health registry data. Need to change legislation and due to that issue we can't start linking process. In 2019 we tried to test EU proposed ICD - AIS conversion tool. The result we got from the Health Information System was very doubtful. Further work is in progress. Legislative changes are being discussed by different stakeholders. |
| ES | Data available from 2010. Since 2011 MAIS3+ is published in official reports. In the near future Spain will add MAIS3+ to the current definition of seriously injured. |
| FI | MAIS3+ (based on AAAM converter tool) is used in official data (from 2014 onwards). A pilot study was made in 2014 where the number of seriously injured MAIS3+ was formed by combining the official road accident participant statistics maintained by Statistics Finland and the Hospital Discharge Register (HILMO), using personal identity numbers as the link. Number of serious injuries (MAIS3+) in road traffic were estimated for the years 2010-2011. |
| FR | Linking between police and health data is done in the Rhone county and then used to build an estimate comparing the structure of Rhone and national accident data. Estimates of the number of people in road traffic crashes with a MAIS3+ injury are currently being evaluated. |
| EL | Hospitals do not systematically collect data on the injury severity of road casualties. |
| HR | Link between police and hospital is based on the law. Only ICD based number is available. |
| HU | The real possibility can only be the transformation of ICD codes to AIS ones; thus Hungary started modification of the legislation in 19.12.2016. The current data architecture does not provide direct linkage between police and hospital data. The National Healthcare Services Center started to upgrade the information system, but the required time for the development of the necessary IT systems is not known yet. |
| IE | Serious injury figures were estimated by converting hospital data to MAIS3+ but were found to be lower than that of police data which is counterintuitive. The RSA and the Health Intelligence Unit (HIU) of the Health Services Executive are working on refining the methodology. Matching of hospital and police data continues to be the long term goal. |
| IT | The current data architecture does not provide direct linkage between police and hospital data. MAIS3+ will be adopted for coding the level of injury and calculated on the basis of data sources such as the hospital discharge register. An estimate of the number of seriously injured has been calculated for years 2012-2015 according to the conversion tables made available by EC. |
| LU | MAIS3+ will be used in the near future. |
| LV | MAIS3+ under discussion. |
| LT | MAIS3+ data already available since 2014. |
| MT | MAIS3+ conversion process is progressing. First reference year of 2015 has been completed, but validation is still ongoing and CARE database has not been updated. |
| NL | Data on MAIS3+ already available 1993-2017. |

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| PL | The work is coordinated by the National Road Safety Council, National Institute of Public Health and Motor Transport Institute. Poland transfer data from 2013 and 2014 according to the recommendations of the CARE group (DG MOVE). In recent years, work on MAIS 3+ in Poland has been stopped. The method proposed by DG MOVE (conversion of ICD-10 scale on the MAIS 3+ scale) in our opinion has errors and leads to incorrect results. Unfortunately, due to a lack of financing, Poland could not launch a national project to develop a methodology for assessing the severity of injuries of road accident victims according to the MAIS 3+ scale. |
| PT | A methodology was developed in 2015 to estimate the number of MAIS3+ serious injuries, using the national hospital discharge database. The Health Ministry applies the EC's AAAM converter to the ICD9-CM codes to calculate the MAIS score. This method is being improved, as Health Ministry is currently using ICD-10-CM/PCS injury codes, since mid-2016. Also, recommendations from SafetyCube D7.1, on external causes codes for road accident victims are being analysed. Under the new Road Safety Strategy (2017-2020), a new working group will establish a procedure to collect in the police data the required information while preserving the victim's privacy. |
| RO | Under discussion. |
| SE | Data already available since 2007. |
| SI | We have made experimental linking between police and hospital data. MAIS3+ data are incomplete and not ready for publication and still under discussion. |
| SK | n/a |
| UK | MAIS 3+ serious injuries is done on an ad hoc basis, and is therefore not published regularly. Figures have been updated to 2016 for UK MAIS3+ figures and are published in table RAS55050: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/555730/ras55050.ods |
| CH | Linking of health and police data has started in 2014. This allows to code the recommended maximum AIS score based on ICD-10. |
| IL | Israel currently uses ISS data. Estimates based on MAIS 3+ definitions were made for 2013-2017, see table 5. |
| NO | Under consideration. |
| RS | Road traffic safety agency has begun activities to introduce the MAIS 3+ scale to record serious injuries. During 2017, an analysis of the possibilities for the most efficient introduction of the MAIS 3+ scale was performed. Road Traffic Safety Agency intends to continue activities on the introduction of the MAIS3+ definition of serious injuries in road traffic accidents in the next period. |

European Transport Safety Council

20 Avenue des Celtes
B-1040 Brussels
dovile.adminaite@etsc.eu
Tel: +32 2 230 4106
www.etsc.eu/pin
🐦 @ETSC_EU

