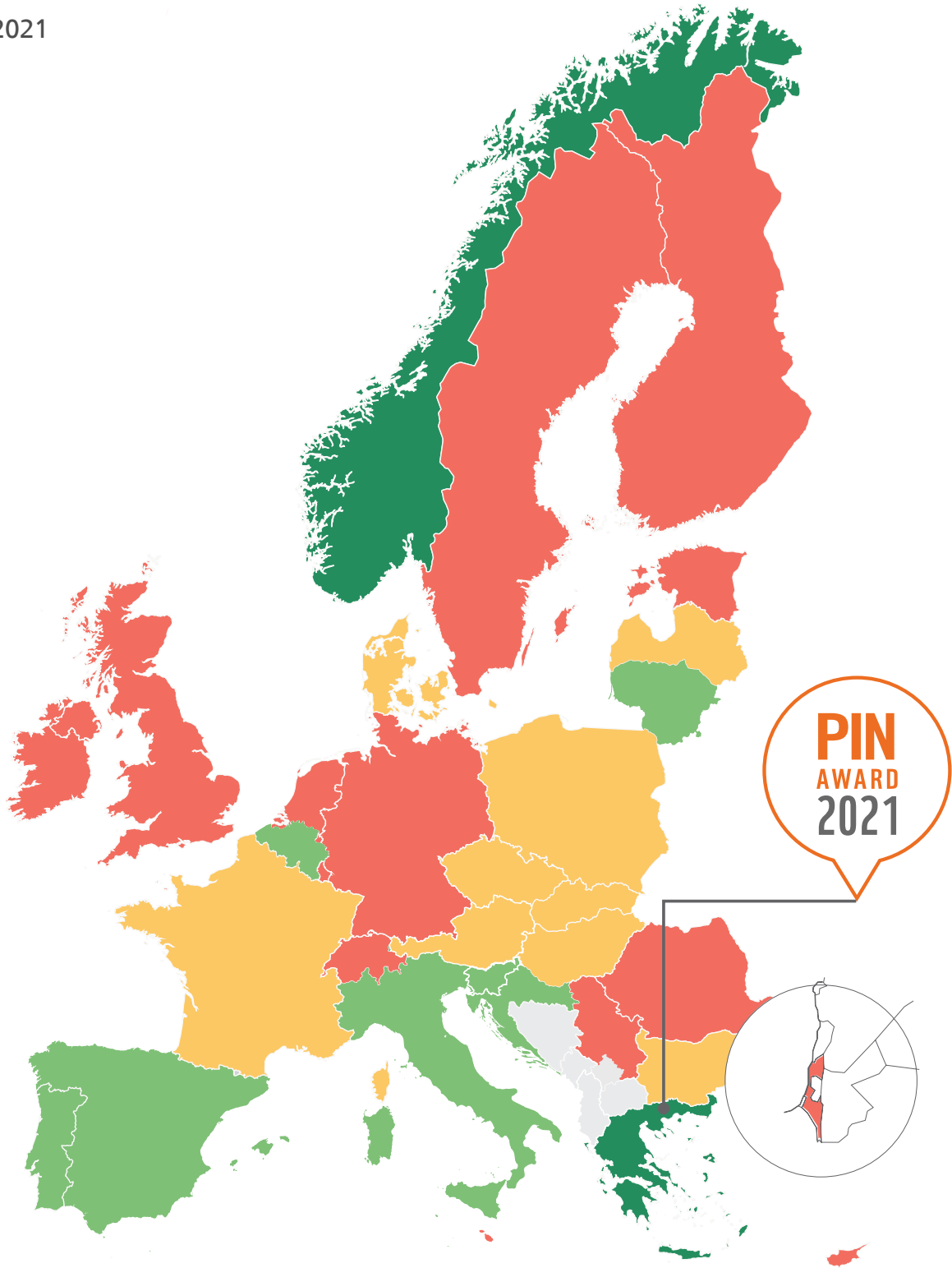


RANKING EU PROGRESS ON ROAD SAFETY

15th Road Safety Performance Index Report

June 2021



European Transport Safety Council

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15th Road safety performance index report

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The PIN programme relies on panellists in the participating countries to provide data for their countries and to carry out quality assurance of the figures provided. This forms the basis for the PIN Flash reports and other PIN publications. In addition, all PIN panellists are involved in the review process of the reports to ensure the accuracy and reliability of the findings.

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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 European Countries. 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



Perhaps a social historian in a hundred years time, looking back over the last 18 months, will coin two new terms: BC and AC; Before Covid and After Covid. It seems likely that the global pandemic that has altered the lives of so many the world over, will come to be seen as a turning point.

In the realm of road safety, the decade until 2020 was marked in several European countries by slow progress, political neglect and inaction. Meanwhile cars got bigger and heavier, the media and some politicians suggested that automation would soon solve road safety problems for good, and budgets for enforcement were slashed. Europe, unlike the United States – a comparable economy, did not reach the end of the decade with higher numbers of road deaths than it started with, but in general, progress for most of the last decade, slowed almost to a halt.

And then Covid arrived.

Any reader of ETSC's long-running series of Road Safety Performance Index (PIN) reports could have guessed that restrictions on travel, and even stay-at-home orders, would lead to less overall exposure to road risk, and therefore fewer deaths. That is indeed what happened. Perhaps less immediately obvious to many policymakers was that empty roads, with less police enforcement, would lead to more speeding, and higher mortality rates per km driven. Reports in the media also raised concerns that lorry drivers, under even more pressure than usual, were also experiencing higher rates of fatigue

and a higher collision rate. The effects of rising numbers of deliveries by van, motorcycle and bike in cities are also of concern. Negative outcomes need addressing so they do not become ingrained.

On the positive side, Covid has had a very visible impact on some of our cities. Pop-up cycle lanes appeared literally overnight in the capitals of Berlin, Brussels, London and Paris. Cities accelerated plans to rebalance the priority given to motorised traffic with healthier modes such as walking and cycling that do not put others at risk. After some years of discussion, Spain introduced its nationwide 30 km/h urban speed limit in May 2021. Local authorities had just six months to prepare. The Covid pandemic has shown that rapid action can be taken when the political will is there.

Road safety is, in the end, a public health issue. Covid has killed 3.5 million people worldwide, at the time of writing. Over the last decade, at least 13 million have died on the world's roads. The extraordinary and necessary global response to the Covid pandemic has shown how policymakers and society as a whole can act when most people are working towards a common goal. Can we apply the same focus to the challenges of road safety?

What will the world look like after Covid? And what will be the outcome for road safety? We are, as I say, at a turning point. And success is not guaranteed. After months of lockdowns and obeying strict rules, are we set for a decade of rule-breaking and excess, another 'roaring twenties'? Or will we learn from this moment that life on earth is fragile, and needs to be protected? Political leadership will be needed more than ever. Every road user has the right and responsibility to move around without risking their own life or the lives of others. And policymakers have a responsibility to build the Safe System that helps protect everyone. Will they approach it with the energy and dedication that many have shown in approaching the challenges of Covid?

This report represents a milestone year. It looks back at the last ten years of EU and national action on road safety, and looks ahead to the next ten years. The years Before Covid were marked by stagnation. Will the years After Covid spark a revolution?

EXECUTIVE SUMMARY

In 2011 the European Union set the ambitious target of halving the number of road deaths between 2010 and 2020. This was the second decade-long EU target period, the first having begun in 2001. This report looks at the progress made towards the 2020 target in EU Member States as well as other countries covered by ETSC's Road Safety Performance Index (PIN) programme. The EU has set two new targets for 2030, again to halve road deaths, and also to halve serious injuries. This report also looks briefly at the EU and national strategies for reaching those targets. In short, we will be looking back at progress and policies from the last decade, and looking forward to what needs to be done to achieve the new goals.

18,844 people lost their lives in road traffic in the EU in 2020, 10,847 fewer than in 2010, representing a 37% decrease. There were 56,305 fewer deaths on EU roads over the target period than there would have been if deaths had continued at the same level as in 2010. ETSC estimates the monetary value to society of human losses avoided by preventing these road deaths at approximately €156 billion.

While the collective EU road death reduction target for 2020 was not met, all countries made improvements, and saved lives by trying to reach it. There was no PIN country where the number of deaths recorded in 2020 exceeded that of 2010. Only one EU Member State reached and even exceeded the target – Greece with a 54% reduction in road deaths (Fig.2). Norway, a non-EU country, has reduced the number of road deaths by 55% since 2010. Portugal, Spain, Croatia, Belgium, Slovenia, Italy, Lithuania, Bulgaria, Denmark, Austria and Hungary achieved a decrease above the EU average of 37%, while the other countries progressed to a lesser extent. The progress was slowest in the Netherlands with a 5% decrease and the UK with 14%.

Over the target period 2010-2020, the largest annual reduction in the number of road deaths in the EU was achieved in 2020: 3,919 deaths were prevented in the EU in 2020 compared to 2019, an unprecedented 17% decrease in just one year. By comparison, road deaths in the EU

declined by just 3% between 2018 and 2019 and by just 6% over the period 2013-2019 (Fig.1). Yet, the exceptional 2020 results were not an extraordinary outcome of dramatic shifts in road safety policy, but rather a consequence of the unprecedented lockdowns related to the Covid-19 pandemic. A special PIN report published in July 2020 revealed a drop of close to a 40% in the number of road deaths in the EU in just the month of April 2020, by which time most European countries were in the first lockdown, compared to the month of April in the previous three years.¹ Unprecedented restrictions on travel and movement had a significant impact on traffic levels and led to a subsequent decrease in road deaths and serious injuries.

The number of people recorded as seriously injured by the police, based on national definitions, decreased between 2010 and 2020 in 25 out of 28 PIN countries that collect data. In the 23 EU² countries where data are available, serious road traffic injuries went down by 14% over the period 2010-2020. The numbers of serious road traffic injuries in the EU as a whole stagnated during most of the decade. An exceptionally sharp reduction occurred between 2019 and 2020, similar to road deaths (Fig.1).

The adoption of the first and second EU targets to reduce the number of road deaths seems to have been a turning point in motivating countries, in particular those facing the greatest

¹ ETSC (2020), PIN Briefing, The Impact of Covid-19 Lockdowns on Road Deaths in April 2020, www.etsc.eu/PINCovid19

² EU23: EU27 excluding IT, FI and IE due to inconsistent data trend and LT due to lack of data.

challenges, to reduce the number of people killed on the roads. The adoption of these targets was followed by markedly faster progress across the EU than in previous decades. However, the six years of extremely slow progress over the period 2013-2019 signalled an urgent need for renewed action at EU and national level.

In May 2018, the European Commission adopted its EU Strategic Action Plan for Road Safety which 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 the number of seriously injured over the same period of time.³ It was followed up in June 2019 with the publication of the EU Road Safety Policy Framework 2021-2030, which introduced eight Key Performance Indicators (KPIs) to measure the overall safety performance of EU Member States.⁴ The EC's new overarching Sustainable and Smart Mobility Strategy, published in December 2020, reaffirmed the EU's road safety targets as well as the political commitment.⁵

The EU targets have been translated into corresponding national targets in almost all of the 21 PIN countries that have prepared or started to prepare national road safety strategies for the upcoming decade. National efforts will be critical for the implementation of the Safe System approach across the EU and for achieving the targets of the next decades. Many countries are already collecting, or, in the near future, planning to start collecting data for the EU Key Performance Indicators (KPIs) announced by the European Commission in agreement with the Member States. The "Baseline" project supported by the European Commission and coordinated by the Vias institute was launched in 2020 to produce values for the EU Road Safety KPIs in the 19 participating Member States. They must work quickly to finalise the definition of several remaining KPIs, set minimum requirements on data collection methodologies and start collecting data. Introducing outcome KPI targets is desirable. Several PIN countries have already introduced or are considering introducing national KPI targets.

Strong political will and urgent measures are needed in all EU Member States to reach the new targets of the coming decade and likewise in other European countries to regain momentum in improving road safety. Increased traffic law enforcement, treatment of high-risk sites, safe speed limits and reduction of motorised traffic, especially in urban areas, are among the measures that can have an immediate positive road safety effect.

Note on countries covered by the ETSC PIN programme

This report includes aggregate data analysis covering the 32 countries that participate in ETSC's Road Safety Performance Index (PIN) programme. They are:

- The 27 EU Member States;
- the United Kingdom, a former EU Member State;
- Norway and Switzerland, two Member States of the European Free Trade Area;
- Israel, an associated state of the European Union;
- Serbia, a candidate EU Member State.

The 27 EU Member States together with the UK agreed to, and worked towards, the aim of achieving the common target to halve the number of road deaths in the EU over the period 2010-2020. 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 in the EU were announced by the European Commission on 17 May 2018.

Strong political will and urgent measures are needed in all EU Member States to reach the new targets of the coming decade and to regain momentum in improving road safety

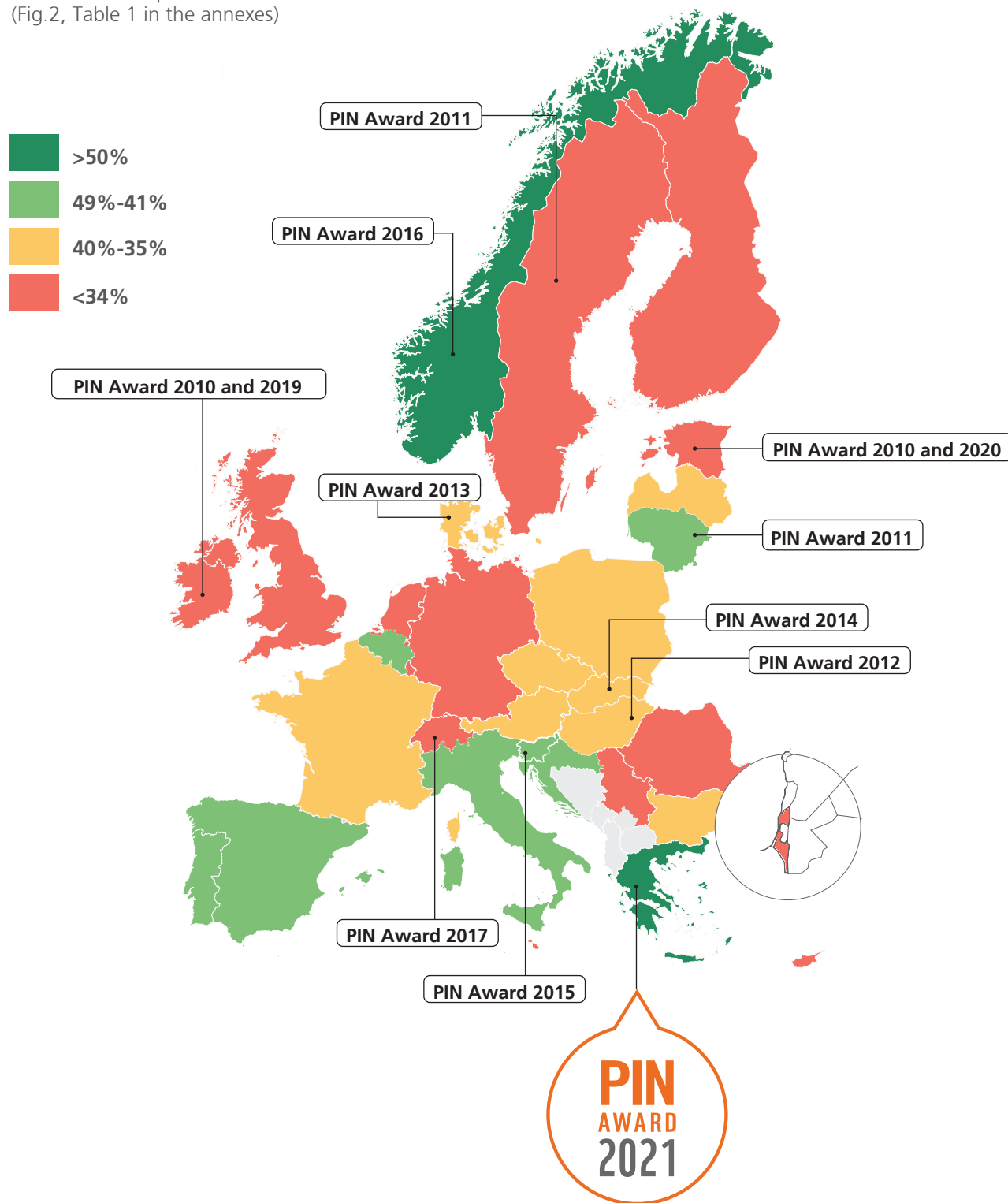
³ European Commission (17.5.2018), Europe on the Move, Sustainable Mobility for Europe: Safe, Connected and Clean, <https://bit.ly/3cGFD7b>

⁴ European Commission (19.6.2019), Commission Staff Working Document, EU Road Safety Policy Framework 2021-2030, Next steps towards "Vision Zero", <https://bit.ly/3vgWTHt>

⁵ European Commission (9.12.2020), Sustainable and Smart Mobility Strategy, <https://bit.ly/2XxH8MZ>

MAP 1:

Relative change in road deaths between 2010 and 2020 and recipient countries of the PIN Award over the period 2010-2020 (Fig.2, Table 1 in the annexes)



RECOMMENDATIONS TO THE NATIONAL GOVERNMENTS

- 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.⁶
- Seek to accelerate progress by all available means, including applying proven traffic law enforcement strategies according to the EC Recommendation on Enforcement.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.
- 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.
- Adopt 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.
- 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.
- In EU Member States, fast track data collection for the Key Performance Indicators included in the EU Road Safety Policy Framework 2021-2030 and report them to the European Commission.
- In EU Member States, designate the maximum number of primary roads to deliver on the estimated number of deaths and serious injuries prevented by the new Road Infrastructure Safety Management Directive⁸.

RECOMMENDATIONS TO THE EUROPEAN COMMISSION

- Call on EU Member States to contribute to reducing road traffic deaths by at least 50% from 2020 to 2030 in line with the United Nations High-Level Political Forum on Sustainable Development's pledge to continue action on the road safety related SDGs, including 3.6, after 2020.⁹

- Create a new EU agency to support safe, smart and sustainable transport operations.

Within the context of the EU Road Safety Policy Framework 2021-2030:¹⁰

- Adopt a long-term operational plan for 2030, including clearer priority measures for action, investments and a timetable against which performance is measured and delivery made publicly accountable by specific bodies.
- Introduce specific measures to reduce serious injuries, in the light of the new target.
- Develop legislation, where appropriate, instead of unenforceable voluntary commitments.
- Implement the EU Road Safety Strategy within the context of changing mobility patterns including new trends such as automation, increased walking and cycling due to promotion of active travel, innovations like electric scooters and an ageing population.
- Urge Member States to designate the maximum number of primary roads to deliver on the estimated number of deaths and serious injuries prevented by the new Road Infrastructure Safety Management Directive.
- Extend the application of the instruments of the Road Infrastructure Safety Management Directive to cover all EU co-financed roads, and all primary roads including all main rural and main urban roads.

Following the adoption of the revision of the General Safety Regulation (GSR)¹¹ on new minimum safety standards for new vehicles:

- Deliver on the estimated number of deaths and seriously injured to be prevented by adopting strong secondary legislation implementing the General Safety Regulation.

Within the context of the EU strategy on automated mobility:¹²

- Develop a coherent and comprehensive EU regulatory framework for the safe deployment of automated vehicles.¹³
- 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.

⁶ ITF-OECD (2008), Towards Zero, Ambitious Road Safety Targets and Safe System Approach, <https://bit.ly/2Mvk1QL>

⁷ EC Recommendation on Enforcement in the Field of Road Safety 2004/345, <http://goo.gl/Vw0zhN>

⁸ Directive (EU) 2019/1936 of the European Parliament and of the Council of 23 October 2019 amending Directive 2008/96/EC on road infrastructure safety management, <http://bit.ly/2XTGwkd>

⁹ Sustainable Development Goals, SDG Indicators, <https://bit.ly/3yX7CsQ>

¹⁰ European Commission (19.6.2019), Commission Staff Working Document, EU Road Safety Policy Framework 2021-2030, Next steps towards "Vision Zero", <https://bit.ly/3vgWTHt>

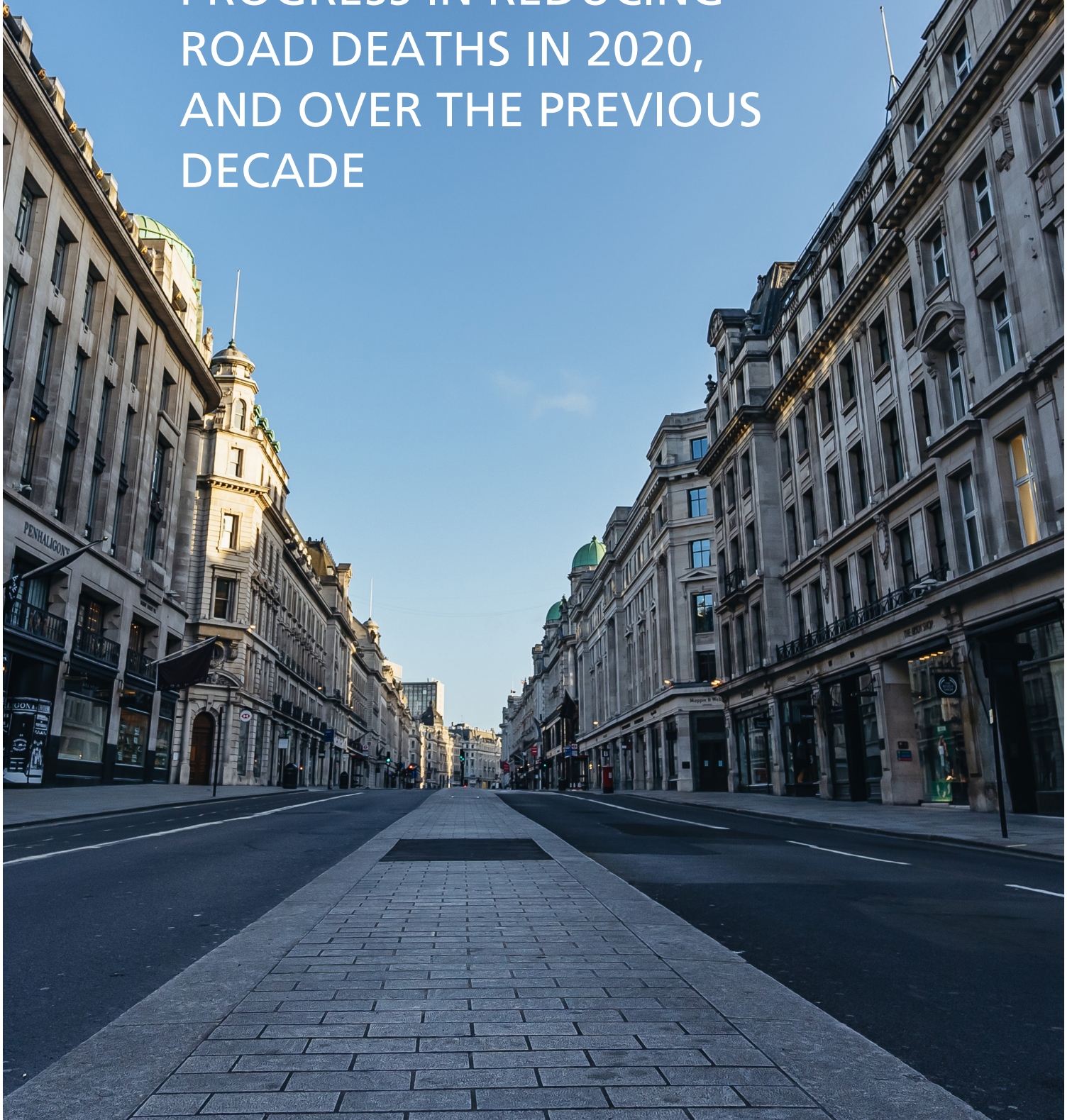
¹¹ Regulation (EU) 2019/2144 of the European Parliament and of the Council on type-approval requirements for motor vehicles and their trailers, and systems, components and separate technical units intended for such vehicles, as regards their general safety and the protection of vehicle occupants and 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>

¹² 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>

¹³ ETSC (2016), Prioritising the Safety Potential of Automated Driving in Europe, <https://goo.gl/TojCUL>

PART I

PROGRESS IN REDUCING ROAD DEATHS IN 2020, AND OVER THE PREVIOUS DECADE



INDICATOR

The EU 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 2010 and 2020 (Fig.2) and between 2019 and 2020 (Fig.3).

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.4). Additionally, the risk expressed as the number of road deaths per billion vehicle km travelled is presented in countries where the data are available (Fig.5).

The data used are from national statistics supplied by the PIN panellist in each country. Provisional road death data for Portugal for 2020 was provided by the National Road Safety Authority (ANSR). The numbers of road deaths in 2020 in Belgium, Denmark, Finland, Germany, Greece, Ireland, Italy, Portugal and Spain are provisional as final numbers were not yet available at the time of this report went 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 may be subject to considerable annual fluctuation. The UK data for 2020 are the provisional total for Great Britain for the year ending June 2020 together with Northern Ireland's total for the calendar year 2020.

The full dataset is available in the annexes.

Population data were retrieved from the EUROSTAT database.

01

1.1 56,305 LIVES SAVED SINCE SETTING THE SECOND EU TARGET TO HALVE THE NUMBER OF DEATHS BY 2020

The EU27 collectively reduced the number of road deaths by 37% over the period 2010-2020 (Fig.1). There were 56,305 fewer deaths on EU roads over the target period than there would have been if deaths had continued at the same level as in 2010.

The overall progress in reducing road deaths on EU roads was almost on track with the EU target from 2010 until 2013 with an 18% decrease. But the good start was followed by six consecutive years of stagnation with only a 6% reduction over the 2013-2019 period. In 2020 there was an exceptional drop of 17% compared to 2019. The 2020 result is strongly related to travel restrictions across Europe due to the Covid-19 pandemic.

The progress in reducing serious road traffic injuries in the last decade in the EU23¹³ collectively was poor, especially in comparison with the reduction in deaths. There was only a 14% reduction over the period 2010-2020 (Fig.1). There was a 4% increase in the number of serious injuries in 2011; it went back to the 2010 baseline level in 2012 and remained almost unchanged for seven years until 2019.

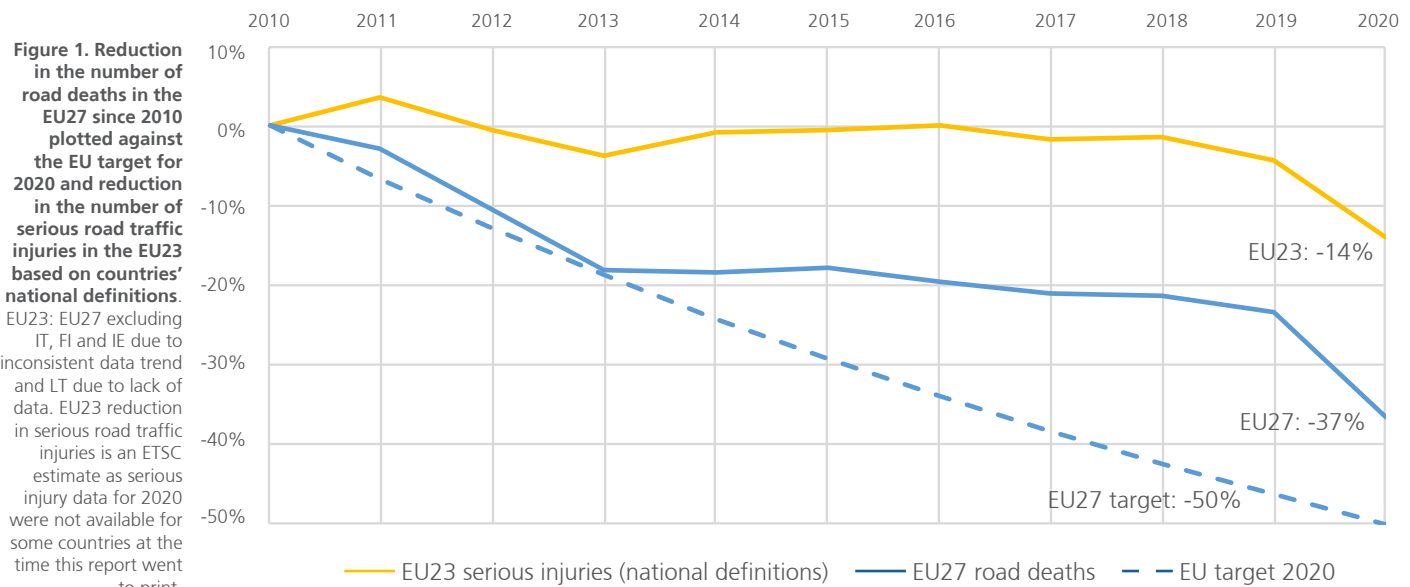


Figure 1. Reduction in the number of road deaths in the EU27 since 2010 plotted against the EU target for 2020 and reduction in the number of serious road traffic injuries in the EU23 based on countries' national definitions. EU23: EU27 excluding IT, FI and IE due to inconsistent data trend and LT due to lack of data. EU23 reduction in serious road traffic injuries is an ETSC estimate as serious injury data for 2020 were not available for some countries at the time this report went to print.

¹³ EU23: EU27 excluding IT, FI and IE due to inconsistent trend data and LT due to lack of data.

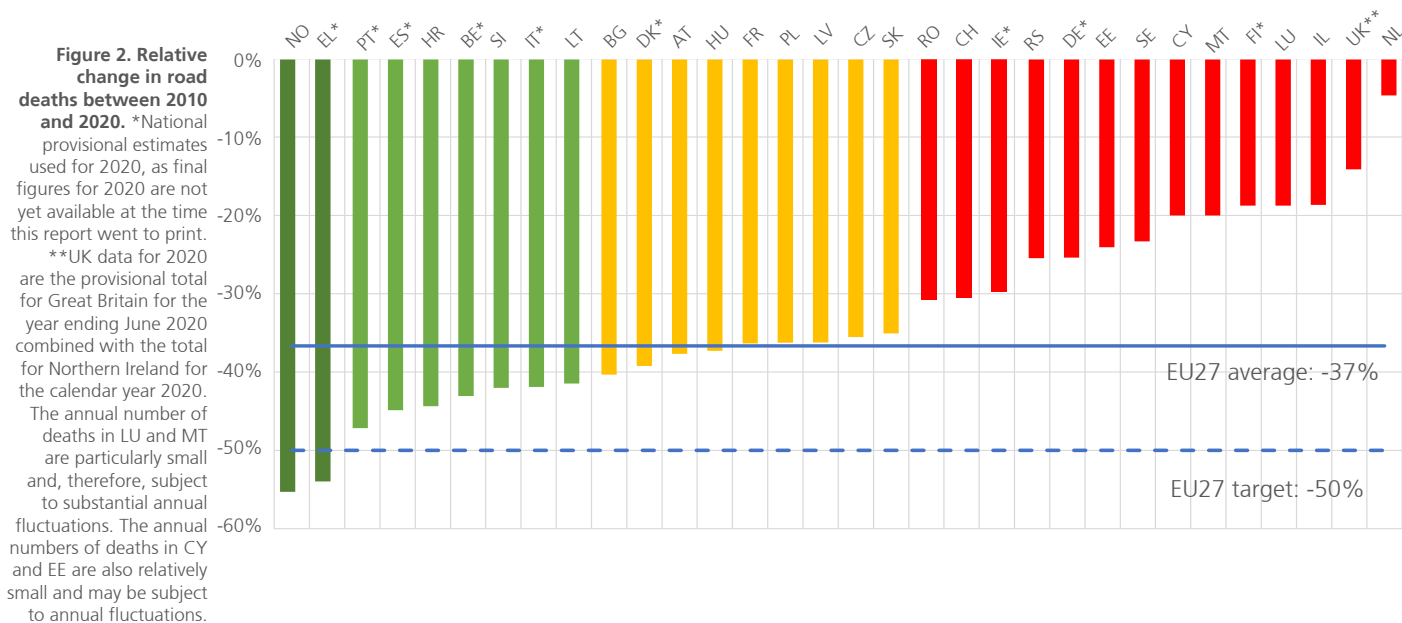
As with road deaths, there was a substantial drop, though of only 10%, in 2020 compared to 2019.

The exceptional 2020 results were largely a consequence of Covid-19 lockdowns and there is no guarantee that this progress can be maintained under a return to business as usual.

While the collective EU road death reduction target in 2020 was not met, all countries made improvements, and saved lives by trying to reach it. There was no PIN country where the number of deaths recorded in 2020 exceeded that of 2010. However, the decrease was not always gradual. There were two countries (Malta and the Netherlands) where the number of deaths in 2019 was higher than that in 2010.¹⁴

1.2 ONE EU MEMBER STATE REACHED THE EU 2020 TARGET TO HALVE THE NUMBER OF ROAD DEATHS

Only one EU Member State reached the target and even did better than that – Greece with a 54% reduction in road deaths (Fig.2). Norway, a non-EU country, reduced the number of road deaths by 55% since 2010. Portugal, Spain, Croatia, Belgium, Slovenia, Italy, Lithuania, Bulgaria, Denmark, Austria and Hungary achieved a decrease above the EU average of 37%, while other countries progressed to a lesser extent. The progress was slowest in the Netherlands with a 5% decrease and the UK with 14%. All countries’ road safety performance in 2020 – the deadline for the EU target – was significantly affected by the Covid-19 lockdowns.



The 2020 ETSC Road Safety PIN Award was presented to Greece on 16 June 2021. The award recognizes Greece’s long term performance in improving road safety. The background to the country’s recent progress is detailed in an interview with Kostas Karamanlis, Minister of Infrastructure and Transport in Part IV.

¹⁴ ETSC (2020), Ranking EU Progress on Road Safety, 14th PIN annual report, www.etsc.eu/PIN14



GREECE

54% REDUCTION IN ROAD DEATHS SINCE 2010, INFRASTRUCTURE IMPROVEMENTS, LOCAL AUTHORITY AND CIVIL SOCIETY EFFORTS CONTRIBUTED TO ROAD SAFETY PROGRESS

There were 579 road deaths in Greece in 2020, 54% fewer than in 2010. During the pandemic period in 2020, road deaths went down by 16% compared to 2019. Recorded serious injuries went down by 72%. A comprehensive explanation of Greece's road safety record over the last ten years is available in Part IV of this report in the interview with Kostas Karamanlis, Minister of Infrastructure and Transport.

"This significant decrease in road deaths in Greece over the last decade is the result of constantly increasing efforts in all aspects of road safety by public authorities and road safety stakeholders. A large part of the country's main road network was significantly improved, with new or upgraded motorways replacing national roads with high number of deaths. As of 2018, there were 2200 km of motorways compared to 750km in 2007. Several local authorities implemented city mobility and safety plans focusing on infrastructure but often also on campaigns. Additional measures included the involvement of the private sector in technical inspection from 2008, a new fines scheme for traffic infringements in 2018 based on the safety significance of the respective violations and offenders' income, and stricter penalties, especially in the case of drink-driving, in the new Penal Code in 2019. As a result, Greek drivers changed their behaviour significantly. This was initially triggered by the economic crisis, but has been maintained well after the crisis, as a result of the constantly improving road safety culture of a more mature society."
George Yannis, Professor, National Technical University of Athens

"Civil Society, coordinated by the Hellenic Road Safety Institute (RSI) "Panos Mylonas", made an important contribution. During 16 years of work, the RSI implemented more than 150 campaigns reaching over 6 million citizens and launched road safety and mobility education classes for 250,000 children at primary and secondary schools. During the pandemic, through an open letter on "Road safety and coronavirus", RSI pointed out the importance of assuring Traffic Safety Education and establishing a safety-minded culture in Greece that will be useful in the fight against the virus as well as for the pandemic of road collisions."
Vassiliki Danelli-Mylona, Hellenic Road Safety Institute (RSI) "Panos Mylonas"



PORTUGAL

47% REDUCTION IN ROAD DEATHS IN 2020, FAST PROGRESS AT THE BEGINNING OF THE DECADE FOLLOWED BY SIX YEARS OF SLOWDOWN

495 people were killed in the target year, 47% fewer than in 2010. Road deaths in Portugal decreased rapidly over the period 2010-2013 followed by six years of slowdown. The pandemic year had a significant impact on the overall result as road deaths decreased by 21% in 2020 compared to 2019. The number of recorded serious road traffic injuries decreased by 29% over the period 2010-2020.

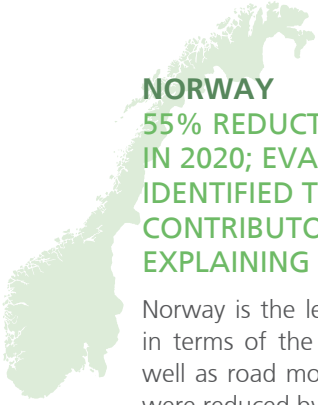
"The National Laboratory of Civil Engineering (LNEC) analysed road safety developments in Portugal. The last year – 2020 – was considered atypical.

Road deaths were reduced by 48% in 2006 compared to 2000 while there was a 44% reduction over the period 2006-2019. In our analysis, we paid a special focus on the last ten years. We looked at 2010-2014 and 2015-2019 separately. In the first period, the road safety situation improved at a slower pace than the previous years. This partially corresponded to the financial crisis. In the second period, there was not much improvement. One worrisome development was an increase in the number of power two wheeler user deaths and serious injuries on all road types and car occupant deaths and serious injuries on main rural roads (non-motorways).

Overall in the last decade, road safety was not on the political agenda and was underfunded, these are constraints that take time to show their effects.

With the elaboration of a new Road Safety Strategy for 2021-2030, the Portuguese National Road Safety Authority (ANSR) is trying to push road safety back on the political agenda. Since improvements in urban areas have been slower than on interurban roads and interventions in these areas depend heavily on local activity, it's important to have the commitment from municipalities."

João Cardoso, The National Laboratory of Civil Engineering (LNEC), Portugal



NORWAY
55% REDUCTION IN ROAD DEATHS IN 2020; EVALUATION STUDY IDENTIFIED THREE MOST IMPORTANT CONTRIBUTORY FACTORS EXPLAINING THE RAPID PROGRESS

Norway is the leader among the PIN countries in terms of the road death reduction pace as well as road mortality. Road deaths in Norway were reduced by 55% going down from 208 in 2010 to 93 in 2020. There were 17 road deaths per million inhabitants in 2020 – the lowest rate among the PIN countries. 627 people were seriously injured in 2020, 12% fewer than in 2010.

The Norwegian Institute for Transport Economics published a study estimating the effects of factors that have contributed to a 68.5% decline in road deaths and a 50.5% reduction in serious injuries over the period 2000-2019. The factors included in the study explain 59% of the decline in the number of killed or seriously injured road users from 2000 to 2019. This means that other factors, not quantified in this study, have also contributed to the road safety progress.

While road safety developments were affected by a vast number of factors, the three most important ones identified by the study were lower mean speed of traffic, treatments of road infrastructure and safer cars.¹⁶

According to the study, out of the 59% of the reduction of road deaths and serious injuries on Norwegian roads since 2000 that can be explained, a decrease in the average speed had made the largest estimated contribution of 22.2%. The second largest contributory factor was estimated to contribute 21.2% of the explained reduction and was road improvements – new motorways, new 2+1 roads with median barriers, median rumble strips, local safety treatments of roads and lowering speed limits in 2001. The third largest factor of 16.5% was due to market penetration of safer cars.

Other contributing factors include lowering risk among young and old car occupants with a 15.9% contribution, increased seat belt wearing with 7.7%, legislation and enforcement with

7.6%, decline of injured children with 6% and increased bicycle helmet wearing with 2.8%.¹⁷

The study concludes that no factor made a dominant contribution and confirms a well-known fact that a long-term improvement in road safety is the result of contributions by a large number of factors, mostly making small or moderate contributions.¹⁸

“The systematic, long term and evidence based work on road safety based on Vision Zero is essential to understand the positive development and good results over time in Norway. A committed lead agency and dedicated involvement of a broad range of participants from both public and private sector ensures a continuous ambition to deliver on our common goals.”

Guro Ranæs, Norwegian Public Roads Administration



SPAIN
45% REDUCTION IN ROAD DEATHS SINCE 2010; BRINGING LEGAL SPEED LIMITS DOWN ON RURAL AND URBAN ROADS; CITIES SHOWING LEADERSHIP

In 2020, 1,366 people were killed on Spanish roads compared to 2,478 in 2010, a 45% reduction. A significant part of the progress, like for many other countries, can be related to a decrease in traffic due to Covid-19 measures. However, Spain reached the national target of 37 road deaths per million inhabitants in 2019 – one year before the pandemic and a year earlier than set out in the National Road Safety Strategy 2011-2020. Serious road traffic injuries in Spain were reduced to the same degree - 45% - from 11,995 in 2010 to 6,642. Just like with road deaths, the most significant progress in reducing serious injuries was reached in the pandemic year 2020.

In the last ten years, traffic law enforcement was an important contributor to improving road safety in Spain. The number of drink-driving checks by the Civil Guard went from 5.5 million in 2018 to 6.5 million in 2019. In 2007, Spain introduced the first checks on drug-driving as it participated in the EU project DRUID over the period 2008-2011.¹⁹

¹⁶ Elvik R., Høy E.K, TOI (2021), Explaining the decline in traffic fatalities and serious injuries in Norway after 2000.

¹⁷ Ibid

¹⁸ Ibid

¹⁹ Information provided by the PIN Panellist.

Currently, Spanish authorities are focusing on changes of speed limits in an effort to continue reducing roads deaths and serious road traffic injuries.

In 2019, the legal speed limit on rural roads was reduced from 100 to 90 km/h.²⁰

On 11 May 2021, the default speed limit was reduced from 50 to 30 km/h on single carriageway urban roads and to 20 km/h in shared spaces.²¹ To facilitate the measure, national guidelines for implementation were communicated to municipalities. The new measure will affect between 60% and 70% of all urban roads, although this proportion will vary from city to city. It is envisaged that the new speed limit will help to protect vulnerable road users as four out of five people killed on urban roads are pedestrians, cyclists or power two wheeler riders. In 2019, for the first time in Spain, the number of vulnerable road user deaths exceeded those of vehicle occupants.²²

Spanish cities are already showing leadership. In September 2020, Bilbao became the first city of more than 300,000 inhabitants to have a 30 km/h limit across the entire city. The local government expects this measure to reduce the proportion of serious collisions to fewer than 10%. Many other cities have already implemented large-scale 30 km/h zone projects, including Madrid, Barcelona, Valencia, Sevilla, Zaragoza, Murcia, Pontevedra, Oviedo, Pamplona, Burgos, Soria, Salamanca, Cuenca, Palma, Córdoba, Málaga, Cádiz and Las Palmas.

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CROATIA

44% REDUCTION IN ROAD DEATHS SINCE 2020 – WORK ON INFRASTRUCTURE AND ENFORCEMENT TOGETHER WITH PREVENTIVE PROJECTS AND CAMPAIGNS CONTRIBUTED TO THE PROGRESS

In 2020, 237 people were killed in road traffic in Croatia, 44% fewer than in 2010. 2,302 people were seriously injured in 2020 - 28% fewer than in 2010.

Since 2001, more than 190 high-risk sites have been reconstructed or removed. Around 100 cameras have been placed on urban and rural roads to detect speed violations, non-use of seatbelts or use of mobile phone while driving.

Croatia is in the final stages of a project implementing automation in the processing of traffic offences, which should result in significantly easier and quicker follow-up procedures - from detection to payment of fines. From June 2021, the whole system will be running automatically and traffic fines will be processed in a single center.

A new law has significantly increased the penalties for the most serious offences, including speeding, driving under the influence and using a mobile phone while driving. From 2019, for each repeat offence that occurs within three years, the fine and penalty points double while a third offence can result in vehicle confiscation.

Seatbelt wearing remains one of the main challenges for Croatia. 61% of drivers and front seat passengers and only 1% of rear seat passengers wore a seatbelt in 2015. 50% of killed vehicle occupants did not wear a seatbelt in 2019 and 44% in 2020. Another challenge is an increase in the use of a mobile phone while driving. According to research, 90% of drivers occasionally use a mobile phone while driving. In 2019, 11% of serious collisions were potentially caused by drivers using a mobile phone behind the wheel.²³

²⁰ Gobierno de España, Real Decreto 1514/2018, de 28 de diciembre, por el que se modifica el Reglamento General de Circulación, aprobado por el Real Decreto 1428/2003, de 21 de noviembre, <https://bit.ly/3flvZSw>, DGT, El Consejo de Ministros aprueba la reducción de la velocidad en carreteras convencionales a 90 km/h, <https://bit.ly/2S5Srehi>

²¹ Gobierno de España; DGT

²² Las principales cifras de la Siniestralidad Vial, España 2019, <https://bit.ly/3pfw44d>

²³ Information provided by the PIN Panellist.



BELGIUM

43% FEWER ROAD DEATHS IN 2020 THAN IN 2010; SPEED MANAGEMENT AND TRAFFIC LAW ENFORCEMENT AMONG KEY MEASURES OF THE LAST DECADE

Belgium recorded a 43% decrease in the number of road deaths over the period 2010-2020, going down from 850 to 484. However, half of this reduction came from a 25% drop in road deaths in the pandemic year 2020. The number of serious injuries was reduced by 36% in 2019, the latest year for which data are available, compared to 2010.

“Belgium has made progress in reducing the number of road deaths during the last decade. Due to the exceptional reduction in road deaths in the pandemic year 2020, Belgium registered 42 road deaths per million inhabitants and finally reached the average level of EU road mortality. Historically, road mortality figures in Belgium have been above the EU average.

In the last ten years of road safety work, public authorities at different levels have, to a great extent, focused on speed management and enforcement. Alcohol interlocks became compulsory in private cars for recidivists with BAC-levels of at least 1.2 g/l and for first-time offenders with BAC-levels of at least 1.8 g/l. In Flanders, the standard speed limit outside built-up areas was reduced from 90 to 70 km/h in 2017. Many municipalities took local speed reduction measures. In January 2021, the Brussels Capital region introduced a general speed limit of 30 km/h within the built-up area. Nevertheless Belgium is still performing worse than most of its neighbours. Room for improvement is present with respect to the public attitudes towards drinking and driving. The abuse of illegal drugs in traffic has been reported to have increased. A worrying evolution is the growing proportion of collisions with cyclists. An important challenge remains to adequately sanction offenders, in particular recidivists.”

Stijn Daniels, Vias institute



SLOVENIA

42% DECREASE IN ROAD DEATHS IN THE LAST DECADE

Road deaths in Slovenia were reduced by 42% in 2020 compared to 2010 going down from 138 to 80. A significant reduction of 22% occurred in the pandemic year 2020 compared to 2019. The number of serious injuries in the last decade was reduced by 22%, from 880 in 2010 to 687 in 2020.

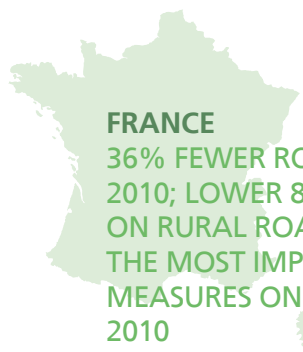
The establishment of the Slovenian Traffic Safety Agency (AVP) in 2010 was an important step in making progress. The body is responsible for coordination and implementation of the road safety strategy.

The current National Road Safety Programme 2013-2022 sets targets to halve the number of road deaths and serious injuries as well as indicator targets, such as increasing the proportion of seatbelt wearing rates for all car occupants to 98% and reducing alcohol-related deaths by 50% by 2022. In terms of seatbelt wearing, the biggest progress in Slovenia has been made among rear seat passengers - 78% buckled up in 2018 compared to 50% in 2010. The use of child restraints for children between 8 and 14 years increased to 90% in 2018 compared to 70% in 2010. Progress was slow in reducing drink-driving as 34% of road deaths were alcohol-related in 2020 compared to 36% in 2010.²⁴

“We regularly monitor the development of indicators and the progress in reaching the objectives set out in the Road Safety Programme to evaluate effectiveness of the implemented measures. In the last ten years there was a major improvement in reducing vehicle occupant deaths as well as those among children and young people. Prevention work and education, infrastructure improvements, introduction of road safety audits, police controls, rehabilitation programmes for drink- and drug-driving offenders and introduction of the second phase driving licence for young drivers contributed to improved safety. We will commit to ambitious road safety work in the new Road Safety Programme which will be ready in 2022. In the next decade, we are planning to give a special focus to vulnerable road user safety.”

Andraž Murkovič, Slovenian Traffic Safety Agency

²⁴ Data provided by the PIN panellist.

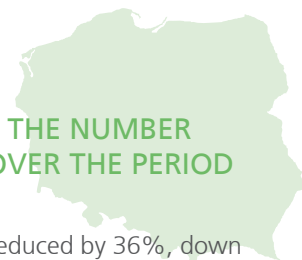


FRANCE

36% FEWER ROAD DEATHS SINCE 2010; LOWER 80 KM/H SPEED LIMIT ON RURAL ROADS WAS ONE OF THE MOST IMPORTANT LIFESAVING MEASURES ON FRENCH ROADS SINCE 2010

In the last decade, road deaths in France decreased by 36%, from 3,992 in 2010 to 2,541 in 2020. The progress in reducing road deaths was on track to reach the EU 2020 target until 2013, followed by four years of stagnation until 2017. A breakthrough was reached in 2018, when road deaths went down by 6% compared to 2017, following the implementation of the decision to reduce the legal speed limit on rural roads from 90 to 80 km/h. An exceptional annual 22% reduction in road deaths was recorded in 2020, mainly explained by the lockdowns and an overall decrease in traffic from March onwards.

As a response to the lack of road safety progress from 2013 to 2017, 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 in July 2018 and brought immediate results. 127 lives were saved on rural roads as the average driving speed on these roads dropped by 3.3 km/h in the first five months of the new speed limit. A 2020 evaluation study by the French research institute Cerema showed that there were 349 fewer deaths on rural roads with the new 80 km/h speed limit compared to the 2013-2017 average on the same roads for the first 20 months of the new speed limit. The same comparison for the rest of the French road network showed an increase of 48 road deaths. The reduced speed limit resulted in a travel time increase of just one second per km, far less than road users expected.²⁵



POLAND

36% REDUCTION IN THE NUMBER OF ROAD DEATHS OVER THE PERIOD 2010-2020

Road deaths have been reduced by 36%, down from 3,907 in 2010 to 2,491 in 2020. A 14% reduction was recorded in the pandemic year 2020 compared to 2019. The number of people seriously injured decreased by 23% over the period 2010-2020.

29% of road users killed in Poland are pedestrians compared to the EU average of 21%.²⁶ Guidelines for institutions responsible for managing pedestrian safety were published in 2015, 2017 and 2018. Road safety audits of pedestrian crossings were performed and, as a result, lighting at selected crossings were installed. National guidelines for safe cycling infrastructure were published in 2019. A regulation on improved pedestrian crossing safety and a ban on using mobile phones while crossing the road came into force in June 2021 under the updates in the Traffic Code.

The updated Traffic Code also introduces a 50 km/h default speed limit on urban roads. For a long time Poland has been the last EU country with a 60 km/h speed limit applicable on urban roads at night.

A recent regulation that should improve safety of vulnerable road users is on micro mobility. Micro mobility devices can only be used on bicycle paths or roads with a 30 km/h speed limit or less at a maximum 20 km/h speed, otherwise on sidewalks at a walking speed. It is forbidden to ride the devices while using a mobile phone or after consuming alcohol.

A new law on emergency corridors, which is expected to reduce the time of the post-collision response taken for emergency services to reach a crashed vehicle, came into force at the end of 2019.

Speeding remains one of the major problems in Poland. Under a project co-financed by the European Union, an automatic Traffic Supervision Centre was created to process and

²⁵ Cerema (2020), Lowering the speed limit to 80 km/h, Final assessment report, <https://bit.ly/3wPCREi>; ONISR, Bilan 2020 de la sécurité routière, <https://bit.ly/34UcfGt>

²⁶ ETSC (2019), How safe is walking and cycling in Europe? PIN Flash 38, www.etsc.eu/pinflash38

streamline safety camera information and over 400 new cameras were installed over the period 2011-2015. An impact assessment revealed that road deaths were reduced by 52% and serious injuries by 42% in the locations where cameras have been installed.²⁷ Guidelines on speed management for roads managed by local authorities were published in 2016. However, the speed problem needs to be continuously addressed as, 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.

"We need stronger traffic law enforcement and more 30 km/h zones in urban areas. Engineering solutions should be introduced to encourage drivers to comply with speed limits. Continuous awareness raising on the effects of inappropriate speed is needed.

A Safe Road Infrastructure Programme 2021-2024 developed by the Ministry of Infrastructure aims to improve road safety on national roads by creating safe road infrastructure. It is the first independent multi-annual programme for road safety infrastructure on such a large scale.

In the future, evaluation of the effectiveness of implemented road safety measures should be carried out. That's essential to the development of effective road safety policy in the future."

Dagmara Jankowska-Karpa, Motor Transport Institute (ITS)

strategy identified 144 individual actions, a clear timetable and lead as well as supporting institutions responsible for implementation of each action. An important event that gave impetus for progress in reducing road deaths in 2017 and 2018 was the mid-term evaluation of the Road Safety Strategy held in 2016 - all stakeholders were brought together to share ideas on how to move forward, in light of the upward trend in road deaths. A 'back to basics' approach was agreed upon, focusing on the killer behaviours, particularly speed, drink and drug-driving, mobile phone use and non-wearing of seatbelts. In addition, a number of new priority actions were agreed for completion before the end of the 2020, and these were published in the Report of the Mid Term Evaluation. Furthermore, in 2018, penalties for drink-driving at the lower levels were reviewed, and automatic disqualification for drink drivers caught with a BAC between 0.5-0.8g/l was introduced. Previously, this had been a penalty point offence. Despite reductions in traffic volumes in 2020, this did not lead to a corresponding decline in road deaths, but provisional data indicate this did lead to a significant reduction in serious injuries.

"Looking to the next decade, Ireland will be embedding the safe system approach further, and will be focusing on improving infrastructure for cyclists and pedestrians and will be concentrating efforts on managing speed, which has to date, remained an intractable problem."

Velma Burns, Road Safety Authority (RSA), Ireland

IRELAND

30% REDUCTION IN ROAD DEATHS SINCE 2010 – EFFECTIVE ROAD SAFETY STRATEGY 2013-2020 HELPED TO SAVE LIVES

The number of road deaths in Ireland went down from 212 in 2010 to 149 in 2020 – a 30% reduction. Ireland was one of the few PIN countries that saw an increase in road deaths in 2020 despite the Covid-19 pandemic. A 6% increase in 2020 followed the two safest years on record.

The implementation of the Irish Road Safety Strategy 2013-2020 was instrumental in reducing road deaths in the last decade. The

GERMANY

26% REDUCTION IN ROAD DEATHS SINCE 2010 – VISION ZERO BECAME A STRATEGY

There were 2,724 road deaths in 2020 in Germany, 25% fewer than in 2010 when 3,651 people were killed. Road deaths were reduced by 32% over 2011-2020 and so Germany did not reach the national target to reduce the number of road deaths by 40% as foreseen in the National Road Safety Programme 2011-2020.

As in all other countries, speed remains one of the biggest road safety problems. In 2019, 32%

²⁷ European Commission (2020), Speed and Speed Management in Road Safety Policy, Executive Seminar organised by the European Commission and the Transport Area of the Florence School of Regulation, European University Institute, <https://bit.ly/3ulMnYw>

of road users were killed due to inappropriate speed, 13,769 were seriously injured.²⁸ In 2021, fines for speeding offences were doubled but they still start as low as €20.²⁹

Following the election in 2017, a newly formed German government signed a coalition agreement which sets Vision Zero as the key approach to road safety policies. Almost all Federal governments across Germany now base their road safety work on Vision Zero.

“The German Road Safety Council (DVR) welcomes the government’s commitment to Vision Zero. However, Germany still needs to apply the principle of prevention in the road safety system. To achieve this proactive approach, the municipal authorities need more freedom to implement comprehensive network planning for all types of road users and to treat high-risk sites. Municipalities should be given more freedom to introduce 30 km/h speed limits. Currently, they can only do so if they have proof that the road stretch is dangerous.

For faster progress in the next decade, DVR is calling for Vision Zero as the strategy for the next government, a full implementation of the road safety strategy 2020-2030, a reduction of the speed limit to 80 km/h on narrow rural roads and an introduction of a general speed limit on motorways. DVR is also asking for a revision of the sanction system for traffic law violations, lowering the drink-driving threshold obliging drink-drivers to undergo a medical and psychological assessment before relicensing from 1.6 to 1.1 g/l BAC, and continuous education for all officials and experts responsible for road safety work.”

Jacqueline Lacroix, German Road Safety Council (DVR)

SWEDEN 23% REDUCTION IN ROAD DEATHS SINCE 2010; THE NATIONAL TARGET OF A 50% REDUCTION OVER THE PERIOD 2007-2020 WAS REACHED

204 people were killed on Swedish roads in 2020 compared to 266 in 2010 – a 23% reduction. There was an 8% decrease in road deaths in 2020 compared to 2019. Over the period 2010-2020, serious injuries were reduced at the same level as road deaths - by 23%.

While Sweden did not reach the EU target, it reached and exceeded the national interim target of 50% reduction of the number of road deaths and 25% reduction of the number of seriously injured between 2007 and 2020. Road deaths were reduced by 54% and serious injuries by 33% over the national target period.³⁰

Road safety work in Sweden is managed by objectives with 14 designated interim Key Performance Indicator (KPI) targets that are regularly monitored to track progress. Over the period 2007-2020 three KPI targets were achieved. The mean speed decreased from 82 to 77 km/h on the state network and the 77 km/h target was met. Mean speed went down from 49 to 46 km/h on the municipal network meeting the 46 km/h target. Traffic mileage with safe vehicles increased from 20% to 82% and exceeded the 80% target.³¹ While other KPI targets were not achieved, significant progress has been made for each KPI.³²

FINLAND 19% REDUCTION IN ROAD DEATHS BETWEEN 2010 AND 2020; NO MAJOR CHANGE IN ROAD SAFETY INDICATORS

Road deaths in Finland were reduced by 19%, from 272 in 2010 to 221 in 2020. In the pandemic 2020, road deaths increased by 5% compared to 2019.

“Road safety developments have been slow in Finland over the past decade. Little has changed year after year in terms of the main road safety indicators such as the proportion of drink-driving.

The National traffic police service was eliminated in 2014, the car fleet is old with an average age of around 12.5 years, driver health problems are a factor in half of all fatal motor vehicle collisions. For a long time Finland did not have a national road safety action plan and therefore lacked coordination of the road safety work. Consequently, effective road safety measures were not implemented over the last decade.

We still have to solve the traditional road safety problems, such as speeding, intoxicated driving and non-use of safety equipment. A challenge

²⁸ ETSC (2020), New German data confirm that one third of collisions involve inappropriate speed, <https://bit.ly/3pe4r1M>

²⁹ Mobilitatsmagazin (2021), German driving laws – fines for speeding, drunk driving, parking violations etc. <https://bit.ly/2RYztZ8>

³⁰ Ibid

³¹ Trafikverket, Analys av trafiksäkerhetsutvecklingen 2020, Målstyrning av trafiksäkerhetsarbetet mot etappmålen 2020.

³² Ibid

is to find cost-effective measures which would work in our large and sparsely populated country. We need a range of new actions involving a wide variety of stakeholders as road safety can only be sustainably improved by a collective action. A lot of attention must be paid to solving the problems at societal level. Mental illness, social exclusion and substance addiction have strong links to road safety. Faster renewal of the car fleet with improvements in infrastructure and traffic law enforcement together with lifelong traffic education would create a good basis for a better next decade.

A new National Road Safety Strategy is in preparation and will hopefully bring a new boost. We must also listen carefully to our Nordic neighbours and try to adopt their good practices. Police continuously report worrying signals of increases in drug driving and other risky behaviours. This was particularly the case in the Covid-year 2020. We must act before all this adds up to increased numbers of deaths and serious injuries on our roads."

Esa Rätty, Finnish Crash Data Institute (OTI)



UK ROAD SAFETY WAS NOT PRIORITISED BY THE CENTRAL GOVERNMENT IN THE LAST DECADE BUT SOME AUTHORITIES INCLUDING LONDON AND SCOTLAND SHOWED LEADERSHIP

Road deaths in the UK were reduced by 14% in 2020 compared to 2010. This figure is provisional and was affected significantly by the pandemic. Serious injuries in Great Britain decreased by 14% over the period 2010-2019.

"Over the past decade (2010-2020) the number of road deaths in the UK has declined only slightly. The UK government describes this as a "plateau". As the 2020 figure is provisional and was significantly affected by the pandemic, it is better to consider 2010-2019.

Although it is worth noting that UK deaths fell sharply in 2008 and 2009 during the recession, it is disappointing that previous more modest but sustained progress was not resumed over the following years as the economy and traffic picked up.

As its population grew, the UK maintained its position as one of the leading road safety performers in Europe, on the basis of deaths per million population. Norway and Switzerland improved more quickly.

Responsibilities for road safety were increasingly handed over to the separate nations of the United Kingdom. This brought benefits and disadvantages. Scotland cut the drink-drive limit and introduced a comprehensive road safety framework with ambitious targets. Northern Ireland progressed on graduated driver licensing and lower drink-drive limits. Wales is introducing national mandatory 20mph (30km/h) speed limits.

In England, Transport for London and Highways England have adopted Vision Zero and a range of ambitious measures to deliver it. However, local authorities in England, where most of the road deaths occur, were left to set their own agendas in a context of budget cuts and competing priorities. Throughout this period levels of road policing declined which significantly undermined road safety enforcement.

Central government supported individual schemes, including investment in cycling safety, a new casualty reporting system (CRASH) and government car buying safety standards. It also commissioned research, including road collision investigation, young driver safety and roads policing. These should bear fruit in the future.

Overall, however, it was a decade of missed opportunities. The UK government did not make road safety a priority, refused to set national casualty reduction targets and failed to provide the comprehensive framework to deliver real change.

There are indications of a new approach from the UK government, recognising the importance of safety to wider agendas such as improving public health, environmental sustainability and relieving pressure on emergency services. Incorporating the equivalent of the revised EU General Safety Regulation into UK law will be an important test."

David Davies, Parliamentary Advisory Council for Road Safety (PACTS)



THE NETHERLANDS SLIPPING DOWN THE EU ROAD MORTALITY RANKING - 40 DUTCH ORGANISATIONS CALL FOR A NEW AMBITIOUS ROAD SAFETY STRATEGY

610 people were killed on Dutch roads in 2020, just 5% fewer than in 2010. This is the slowest rate of progress among EU countries. The number of road deaths in 2018 and 2019 exceeded that of 2010. The 5% decrease since 2010 was reached due to an 8% reduction in 2020 compared to 2019, likely triggered by measures associated with the Covid-19 pandemic. The Netherlands is slipping down the EU road mortality ranking – it was third with 39 deaths per million inhabitants in 2010 and seventh with 35 in 2020, overtaken by Denmark, Spain, Ireland and Germany. Serious road traffic injuries increased by 12% over the period 2010-2019.

A broad coalition of almost 40 organisations has called on the next Dutch government to deliver a new road safety strategy. Launched in April 2021, Road Safety Manifesto 2.0 supports the government's Vision Zero goal for 2050, but asks for interim targets that would help achieve it. The coalition calls for an 11% annual reduction in road casualties. It also asks for indicator targets to be achieved by 2025, such as no cyclist should have to share a road with motorised traffic where the legal speed limit is 50 km/h.³³ The coalition also calls for targeted action on residential areas, safer vehicles, elderly people and distractions.

Additionally, the organisations are asking for an increase in spending on road safety, at least €12 billion will be needed over the next 30 years, with five billion of that amount for infrastructure safety. According to cost-benefit analysis quoted in the manifesto, every euro invested in infrastructure safety brings three or four euros in return.

1.3 AN EXTRAORDINARY 17% REDUCTION IN ROAD DEATHS IN THE EU IN 2020 RELATED TO THE COVID-19 PANDEMIC

Out of 32 countries monitored by the PIN programme, 26 registered a decrease in road deaths in 2020, compared to 2019 (Fig.3). Bulgaria was ranked first with a 26% reduction in the number of road deaths between 2019 and 2020. It is followed by Belgium, Malta and Italy with 25%, Hungary with 23%, Spain, Denmark, France and Slovenia with 22%. A 21% increase was registered in Switzerland, 18% in Luxembourg and 15% in Estonia.³⁴

Road deaths in the EU collectively were reduced by an unprecedented 17% in just one year. Yet, the exceptional 2020 results are to a large extent a consequence of Covid-19 lockdowns and there is no guarantee of continuation. A special PIN report revealed that there was almost a 40% drop in the number of road deaths in the EU in just the month of April 2020, by which time most European countries were in the first lockdown, compared to the month of April in the previous three years.³⁵ Unprecedented restrictions on travel and movement led to a significant reduction in traffic and a decrease in road deaths.

Data on distance travelled in 2020 are not available in all EU countries, but the number of km driven by motor vehicles decreased in all 13 countries that could provide data (Fig.3). In five countries – Croatia, Czechia, Denmark, Malta and Portugal – road deaths decreased by a greater degree than traffic volumes. In Lithuania road deaths decreased by a lesser degree than traffic volumes. In Estonia, Finland, Latvia and Switzerland the number of road deaths increased while distance travelled went down. In Germany, Sweden and Italy road deaths were reduced at a similar degree as traffic volumes.

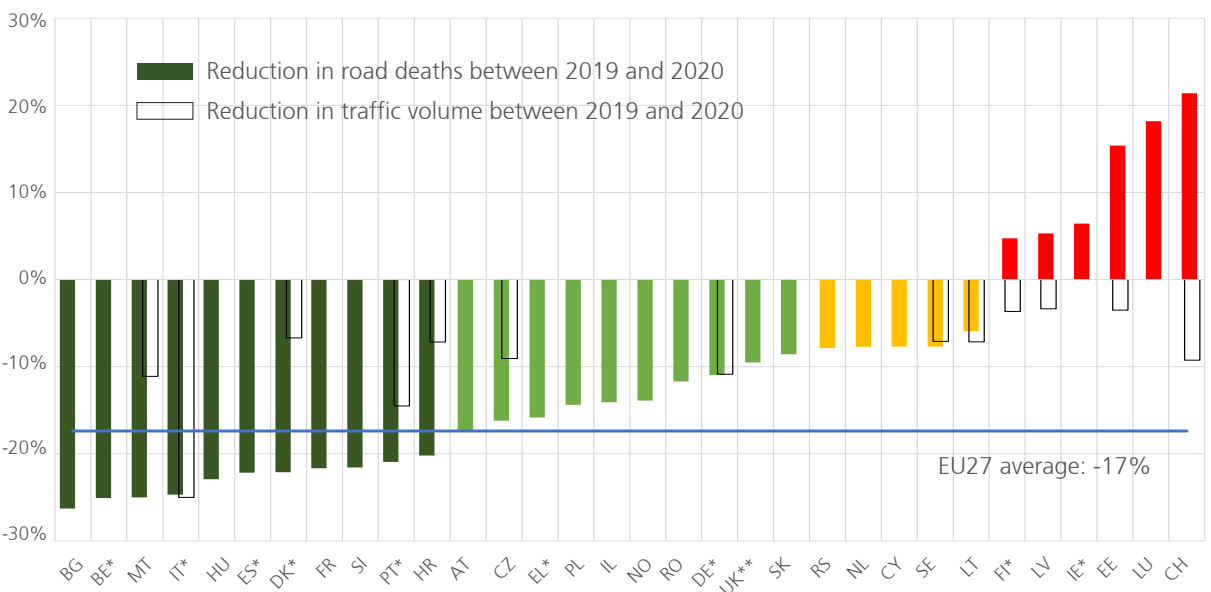
Observations from some EU countries on the dynamics of road death developments during the pandemic year 2020 are included in this report. A comprehensive picture of the effects of Covid-19 lockdown measures on road safety and possible future consequences, including a likely increase in travel by individual modes at the expense of public transport, should be further researched.

³³ Verkeersveiligheidscoalitie, Oproep aan de tweede kamer en aan het nieuwe kabinet, <https://bit.ly/3yYLz4P>

³⁴ Annual numbers of road deaths in Luxembourg are particularly small and, therefore, subject to substantial annual fluctuations. Annual numbers of deaths in Estonia are also relatively small and may be subject to considerable annual fluctuation.

³⁵ ETSC (2020), PIN Briefing, The Impact of Covid-19 Lockdowns on Road Deaths in April 2020, www.etsc.eu/PINCovid19

Figure 3. Relative change in road deaths between 2019 and 2020 and corresponding percentage change in traffic volume. *National provisional estimates used for 2020, as final figures for 2020 were not available at the time this report went to print. **UK data for 2020 are the provisional total for Great Britain for the year ending June 2020 combined with the total for Northern Ireland for the calendar year 2020. The annual number of deaths in LU and MT are particularly small and, therefore, subject to substantial annual fluctuations. Annual numbers of deaths in CY and EE are also relatively small and, therefore, may be subject to annual fluctuations.



Note: traffic volume data collection methodologies differ between countries and are not comparable. Some data on traffic volumes cover only part of the road network. CZ – traffic volume data on motorways and roads of 1st, 2nd and 3rd class category where 83% of road deaths occur. LT – traffic volume data on main roads. SK – traffic volume data on motorways and roads of 1st and 2nd class category.

AUSTRIA A COMPREHENSIVE OVERVIEW REVEALED AN INCREASE IN SPEED VIOLATIONS DURING COVID-19 LOCKDOWNS

The Austrian Road Safety Board (KFV) published a comprehensive overview of developments in road collisions in Austria in 2020.³⁶ Traffic volumes on motorways and expressways fell by 19% in 2020 compared to 2017-2019 average, the drop was particularly noticeable during the two lockdown periods that were introduced in the country in March-May and November-December 2020. The number of road deaths in 2020 was 338 - 18% lower than in the two previous years. However, during the period of the two lockdowns that took place in Austria in 2020 road deaths for some road user groups went down by a lower proportion than traffic volumes which means that road risk during the lockdown periods actually increased. This was the case for motorcyclists and, during the first lockdown, for car occupants.

Cyclists and heavy goods vehicle occupants were the only two road user groups that saw an increase in the number of road deaths in Austria in 2020. There were 13% more cyclist deaths and 18% more HGV occupant deaths in 2020 compared to the 2017-2019 average.

Data point to speed as an important contributor to the extra fatal collisions – inappropriate speed was identified as the main factor in 36% of all fatal collisions in 2020 compared to 26% in 2017-2019. Speed measurements on urban roads with 50 km/h speed limit show that 51% of motorists exceeded the speed limit in 2020 compared to 44% in pre-Covid times. The proportion of offenders that exceeded the 50 km/h speed limit by more than 30 km/h was three times higher with 0.3% in 2020 compared to 0.1% before the Covid crisis.

Observation studies showed that 12% of motor vehicle drivers did not give way to pedestrians intending to cross the road on pedestrian crossing in 2020 compared to 8% in 2017-2019.

A representative survey reveals that, once the Covid-19 pandemic is over, 33% of respondents in Austria say they want to walk more and 16% want to cycle more compared to pre-Covid times.

The KFV study concludes that it is likely collisions with unprotected road users might grow in the future. It is therefore important to improve pedestrian and cyclist infrastructure safety and to take measures to reduce excessive speed.

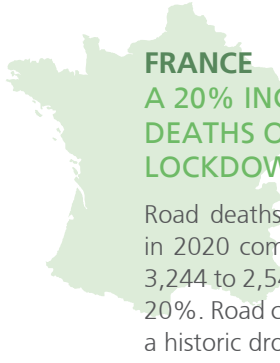
³⁶ KFV, Von Christian Kräutler, Klaus Robatsch und Aggelos Soteropoulos, Corona, Mobilität und Verkehrssicherheit.



THE NETHERLANDS LARGEST NUMBER OF CYCLISTS KILLED IN 25 YEARS IN 2020

Overall road deaths in the Netherlands decreased by 8% in 2020 compared to 2019. The largest decrease of 18% was observed among passenger car occupants. Cyclists were the only road user group which saw an increase in deaths in the pandemic year – 13% more cyclists were killed in 2020 compared to 2019. 229 cyclists were killed in 2020 - the highest number in the last 25 years. One third of those killed cyclists were riding an e-bike.³⁷

According to Statistics Netherlands, the Covid-19 lockdown resulted in reduced traffic and less congestion on the roads. Yet, the number of road deaths did not decrease proportionally. In fact, on the calmest days in terms of traffic in March and April 2020, the number of road deaths was higher than a year earlier. It is observed that during the lockdown the use of public transport decreased while the use of individual vehicles (cars, bikes) increased.³⁸³⁹



FRANCE A 20% INCREASE IN CYCLIST DEATHS ON RURAL ROADS OUTSIDE LOCKDOWN PERIODS

Road deaths in France were reduced by 22% in 2020 compared to 2019, going down from 3,244 to 2,541. Injury collisions also dropped by 20%. Road collision indicators in France showed a historic drop starting in March 2020.

According to the French Road Safety Observatory, the weekly evolution of personal injury collisions since the beginning of 2020 correlates closely to the traffic volume indicator on the national road network (motorways and national roads). It is therefore very likely that a large part of the decrease in road deaths is explained by the decrease in road traffic.

All road user groups saw a decrease in road deaths in France in 2020, the largest

proportional decrease of 40% was registered among light goods vehicles occupants. The lowest proportional decrease was among cyclists with 5%.

A total of 178 cyclists were killed in 2020, 87% were males. Outside lockdown periods in 2020, bicycle use soared by 31% in urban areas and by 15% outside urban areas. During the months outside lockdown periods, cyclist deaths outside urban areas increased by 20%, from 64 during the corresponding months in 2019 to 77 in 2020. This increase was particularly evident among male cyclists above 55 years old. This can be related to a boost in leisure activities outside built-up areas. Outside the lockdown periods, there was a 23% growth in serious injuries of female cyclists in the 25-54 age group category inside urban areas - 499 were injured during the corresponding months in 2019 compared to 648 in 2020. This can be related to the fact that many chose to cycle instead of using public transport.

In 2020, children (0-13 years old) were the only road user age group for which road deaths did not decrease – there was one death more compared to 2019 due to multiple death car collisions in the summer. All other age-group categories saw a decrease. The largest decline was for people aged 75 and over with a 34% reduction or 180 fewer deaths than in 2019; the next to lowest decline was for people aged 65-74 years with an 8% reduction or 26 fewer deaths than in 2019.

Social distancing rules changed the way many road users travel, especially in urban areas where the use of individual modes, including bicycles and e-scooters, increased and the use of public transport went down; with travel restrictions, people enjoyed their leisure time in the vicinity which also led to more walking and cycling outside urban areas.⁴⁰

³⁷ CBS, 610 traffic deaths in 2020, <https://bit.ly/3c8k9Qr>

³⁸ Ministry of Infrastructure and Water Management, KiM Netherlands Institute for Transport Policy Analysis (April 2020), Mobility and the coronavirus crisis, <https://bit.ly/2YLxajr>

³⁹ CBS, 610 traffic deaths in 2020, <https://bit.ly/3c8k9Qr>

⁴⁰ ONISR (2021), 2020 Road Safety Annual Report, <https://bit.ly/3z0AfoT>



SPAIN THE EFFECTS OF THE FIRST COVID-19 LOCKDOWN ON INTERURBAN ROAD SAFETY

A Directorate General for Traffic (DGT) report published in May 2020 analysed road safety developments during the first national lockdown from 15 March until 6 May 2020 on interurban roads compared to the same period in 2019 and over the last five years.

The number of road deaths occurring within 24 hours on interurban roads decreased by 70% within the analysed period - a similar proportional decrease to the traffic volume on these roads (-69%).

25% of all those killed on interurban roads were heavy goods vehicles drivers over the analysed period, compared to an average of 3% in the last five years over the same period. The highest reduction in terms of road user groups was observed among vulnerable road users, who represented 17% of all killed over the analysed period in 2020 compared to 36% in the last five years. The highest reduction was observed in motorcyclists (from 44 deaths over the analysed period in 2019 to 2 deaths in 2020).

38% of killed car occupants did not wear a seatbelt in the analysed period in 2020 compared to 14% over the same period in 2019.

The main collision factors during the 2020 spring lockdown on interurban roads (excluding drink and drug driving, for which data will only be

available later) were:

- distraction – contributed to 44% of collisions compared to 35% over the same period in 2019.
- inappropriate speed - present in 27% of fatal collisions compared to 30% in 2019
- fatigue - present in 15% of all fatal collisions on interurban roads, the same proportion as in 2019.⁴¹

1.4 NORWAY AND SWEDEN - THE SAFEST COUNTRIES FOR ROAD USERS

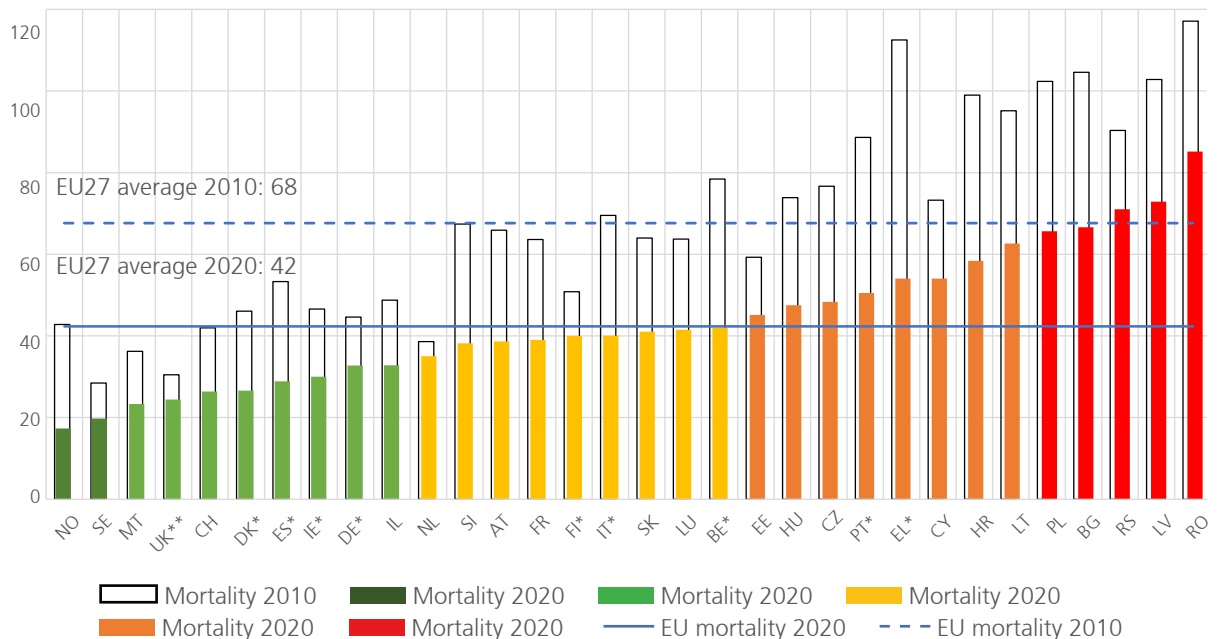
In the EU27, the overall level of road mortality was 42 deaths per million inhabitants in 2020 compared to 67 per million in 2010 (Fig.4). The EU road mortality rate was 51 per million in 2019, the unprecedented drop in mortality between 2019 and 2020 was mainly due to the traffic restrictions to contain the pandemic.

The mortality in the PIN countries differs by a factor of almost four between the groups of countries with the highest and the lowest risk.

Norway remains the leader among PIN countries with 17 road deaths per million inhabitants, followed by Sweden with 20 deaths per million inhabitants in 2020. These countries are also among the leaders in terms of road deaths per motor vehicle km-driven (Fig.5). In Malta, the UK, Switzerland and Denmark, road mortality is below 27 per million. The highest road mortality is in Romania and Latvia with 85 and 73 road deaths per million inhabitants respectively.

Figure 4. Mortality (road deaths per million inhabitants) in 2020 (with mortality in 2010 for comparison).

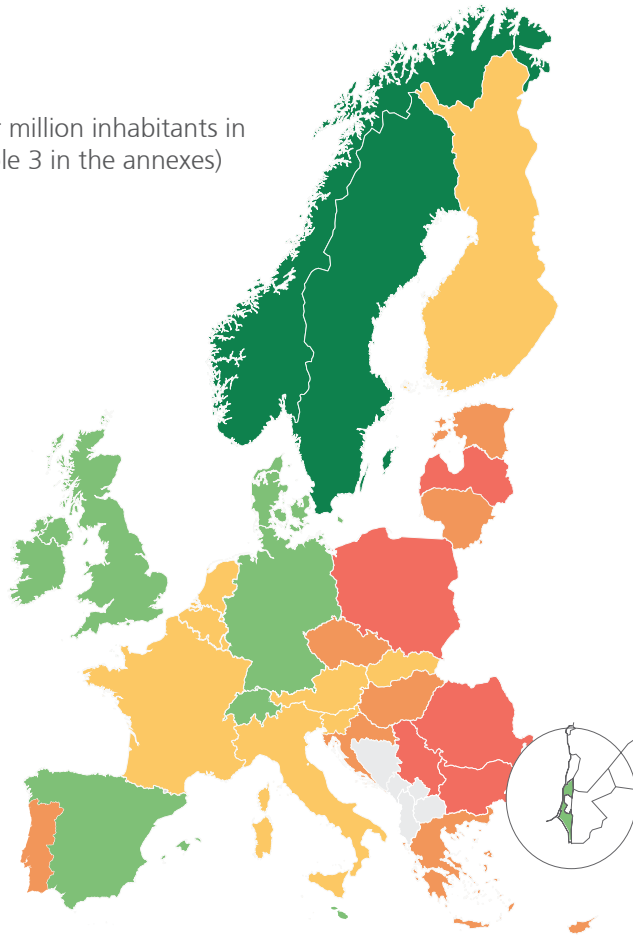
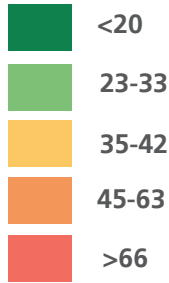
*National provisional estimates used for 2020, as final figures for 2020 were not available at the time this report went to print. The annual number of deaths in LU and MT are particularly small and, therefore, subject to substantial annual fluctuations. **UK data for 2020 are the provisional total for Great Britain for the year ending June 2020 combined with the total for Northern Ireland for the calendar year 2020.



⁴¹DGT, Siniestralidad a 24h en vías interurbanas durante el ESTADO DE ALARMA por el COVID-19 Datos provisionales, <https://bit.ly/2SRZ45M>

MAP 2:

Road deaths per million inhabitants in 2020 (Fig.4, Table 3 in the annexes)



1.5 ROAD DEATHS PER VEHICLE-DISTANCE TRAVELLED

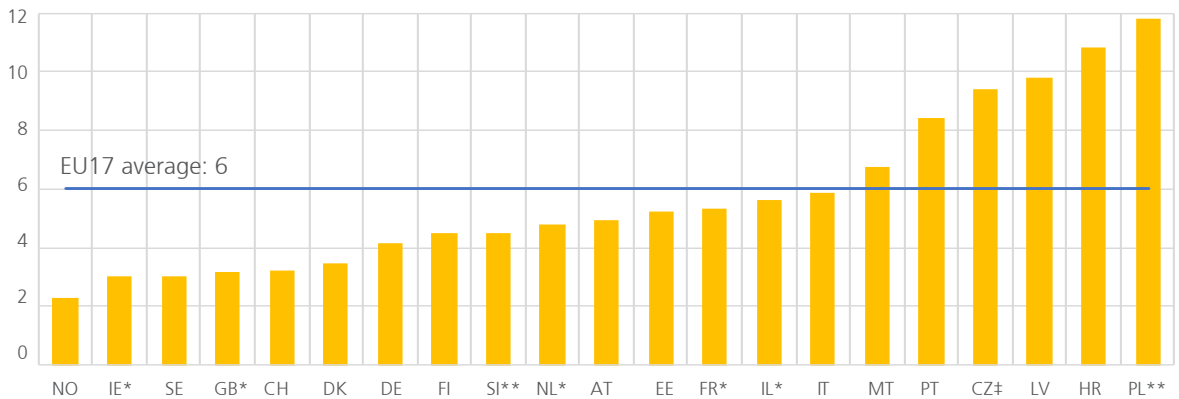
Fig.5 shows road deaths per billion motor vehicle-km travelled for the 21 PIN countries where up-to-date data are available. This indicator complements the well-established indicator of road mortality (Fig.4).

Measured in this way, Norway, Ireland, Sweden, Great Britain, Switzerland and Denmark top the ranking with the lowest number of deaths per billion vehicle km among the countries collecting up-to-date countrywide data (Fig.5). The rate in Poland and Croatia is almost four times higher than in the countries at the top of the ranking.

Differences between the relative positions of countries in Fig.4 and Fig.5 can arise from differences in aspects such as the levels of motorcycling, cycling or walking, the traffic volume, the proportions of traffic on motorways and rural roads, different methods for estimating the distance travelled or other factors.

For example, Malta has the second lowest road mortality rate in the EU, but 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 largely be attributed to the short vehicle distances travelled in Malta and a high proportion of travel that takes place in urban areas when compared to other countries.

Figure 5. Road deaths per billion vehicle-km 2018-2020 average. Average for the latest three years for which both the road deaths and the estimated data on distance travelled are available. *2017-2019 data for AT, ES, FR, IE, NL, GB, IL. **2016-2018 data BE, PL, SI. Data for GB is used instead of the UK as since 2014 data on distance travelled in Northern Ireland are not available. EU18 average: EU27 excluding BE, BG, CY, EL, ES, HU, LU, LT, SK and RO due to lack of data on vehicle distance travelled. Note: single cyclists deaths are included in the road death data used in this figure.



1.6 SOME 10,847 FEWER ROAD DEATHS ON THE EU ROADS IN 2020 THAN IN 2010 IS OF A CONSIDERABLE VALUE

There were around 10,847 fewer road deaths in 2020 than in 2010 in the EU27. This reduction is 4,004 road deaths short of the reduction that would have occurred if the EU target 2010-2020 had been reached.

56,305 road deaths have been prevented in the EU over the period 2011-2020 compared with the number that would have been recorded if each Member State had continued to record the same number each year as in 2010. 33,784 more lives could have been saved if the annual reduction of 6.7% had been reached and the EU road death reduction target had been achieved (Fig.6, left column).

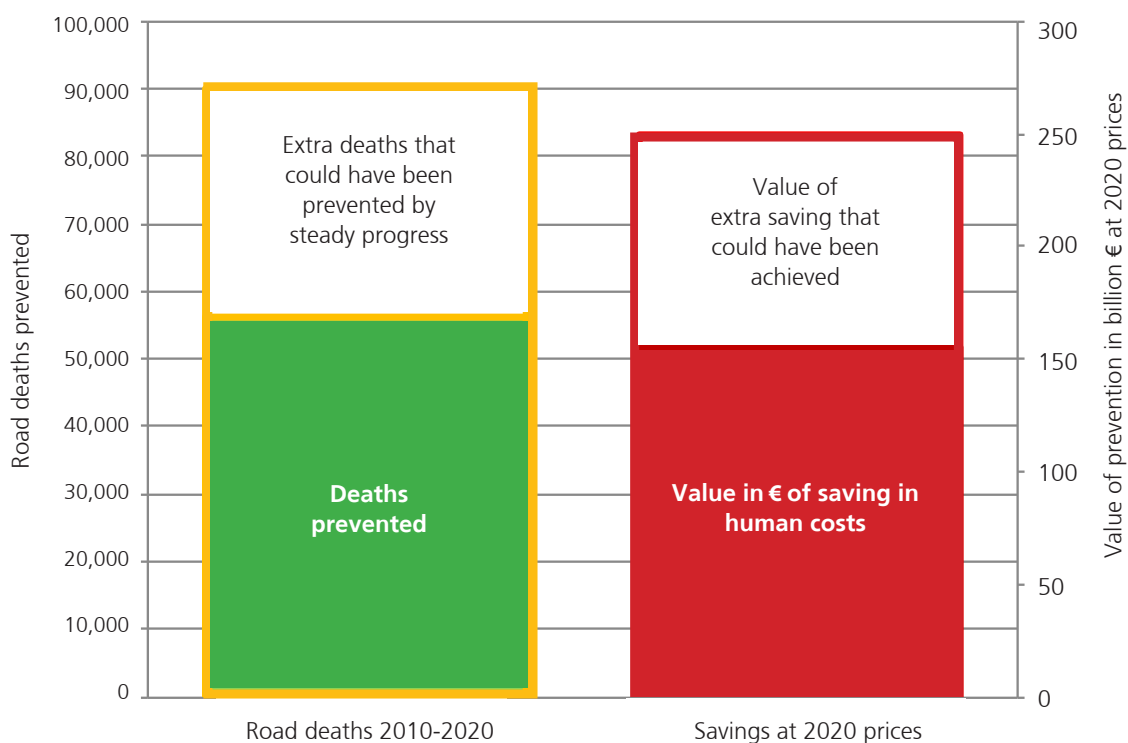
Putting a monetary value on prevention of loss of human life can be debated on ethical grounds. However, doing so makes it possible to assess objectively the costs and the benefits of road safety measures and helps to make the

most effective use of generally limited resources. The Value of Preventing one road Fatality (VPF), estimated for 2016 in the EU Handbook on the external costs of transport (2019)⁴², has been updated in this PIN report to take account of changes to the economic situation in the intervening years. As a result, we have taken the monetary value for 2020 of the human losses avoided by preventing one road death to be €2.77 million at market prices in 2020.⁴³

The total value of the human losses avoided by reductions in road deaths in the EU27 for 2020 compared with 2010 is estimated at approximately €30 billion, and the value of the reductions in the years 2011-2020 taken together compared with 2010 is about €156 billion (Fig.6, 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 2011-2020 would have increased the valuation of the benefit to society by about €93 billion to about €249 billion over those years (Fig.6, right column).

Figure 6. Reduction in the number of road deaths in EU27 over the period 2011-2020 and valuation at 2020 prices and value, together with the additional savings – both in deaths prevented and costs of this number of deaths – that could have been achieved if the EU had reached the 2020 road safety target by steady annual reduction of 6.7% that was needed to reach the EU 2020 target.



⁴² European Commission (2019), Handbook on the external costs of transport, <https://bit.ly/3zlx4t6>

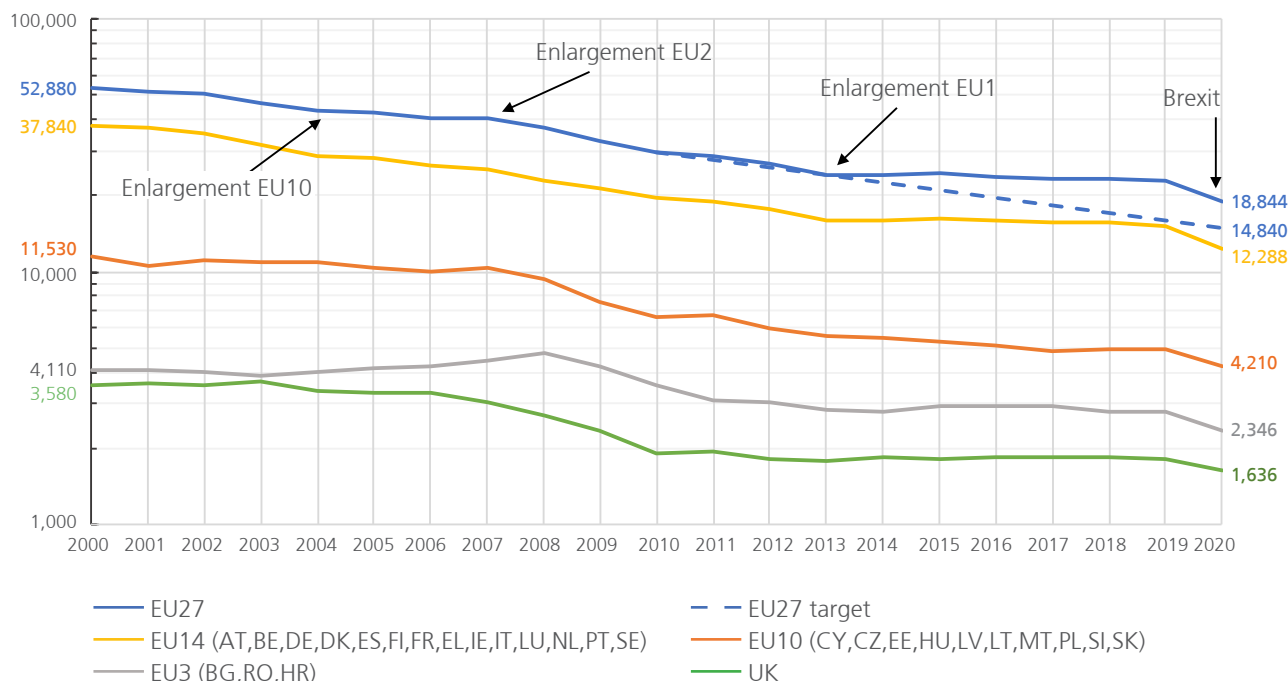
⁴³ For more information, see ETSC (2020), Updated methodological note to the 14th Road Safety Performance Index (PIN) Report, www.etsc.eu/pin14.

1.7 A HISTORICAL OVERVIEW: ROAD DEATH REDUCTION IN THE EU SINCE 2000

There was a 64% reduction in the number of road deaths in the EU27 since 2000 (Fig.7). Over the 20 year period, the EU14 reduced

the number of road deaths by 68%, the EU10 by 63% and the EU3 by 43%. The reduction pace is similar for all groups of countries over the last ten year period 2010-2020: the EU14 reduced the number of road deaths by 37%, the EU10 by 36% and the EU3 by 34%.

Figure 7. Reduction in road deaths since 2000 in the EU27. A logarithmic scale is used to enable the slopes of the various trend lines to be compared.

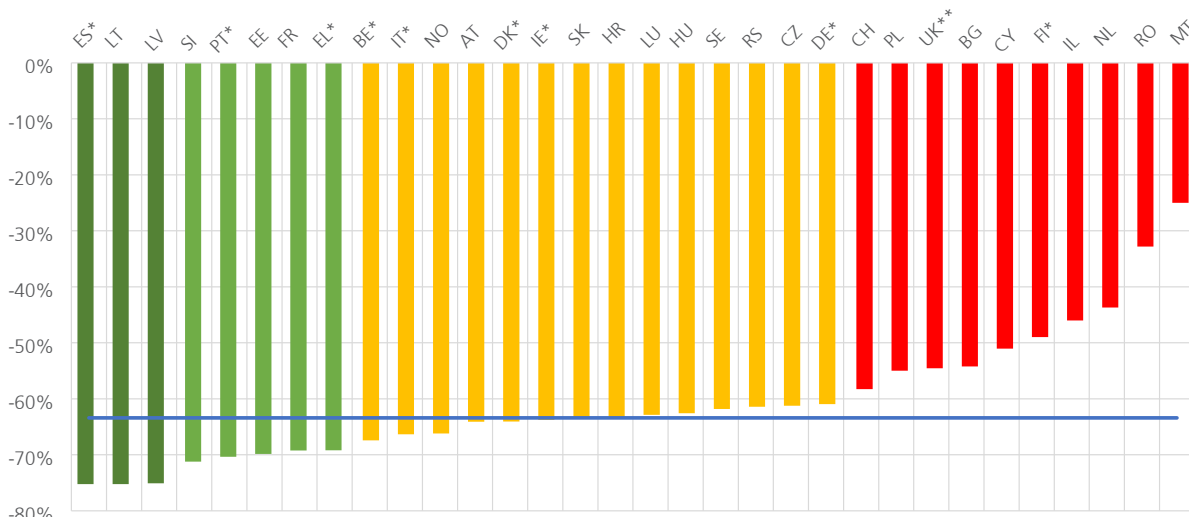


1.8 63% REDUCTION IN THE NUMBER OF ROAD DEATHS SINCE 2001

Since the first EU target for reducing the number of road deaths was introduced in 2001, Spain, Lithuania and Latvia have achieved the highest reductions – all three countries reduced

the number of road deaths by 75% (Fig.8). They are followed by Slovenia with a 71% reduction and Portugal and Estonia with a 70% reduction. However, progress has been particularly slow in Malta⁴⁴ with a 25% reduction and Romania with 33%.

Figure 8. Relative change in road deaths between 2001 and 2020. *National provisional estimates used for 2020, as final figures for 2020 are not yet available at the time of this report went to print. **UK data for 2020 are the provisional total for Great Britain for the year ending June 2020 combined with the total for Northern Ireland for the calendar year 2020.



⁴⁴ Annual numbers of road deaths in Malta are particularly small and, therefore, subject to substantial annual fluctuations.

RECOMMENDATIONS TO THE NATIONAL GOVERNMENTS

- 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.⁴⁵
- Seek to accelerate progress by all available means, including applying proven traffic law enforcement strategies according to the EC Recommendation on Enforcement.⁴⁶
- 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.
- 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.
- Adopt 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.
- 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.

⁴⁵ OECD-ITF (2016), Zero Road Death and Serious Injuries, Leading a Paradigm Shift to a Safe System approach, <https://goo.gl/hTE4BG>

⁴⁶ EC Recommendation on Enforcement in the Field of Road Safety 2004/345, <http://goo.gl/Vw0zhN>



PART II

SERIOUS INJURIES: LITTLE PROGRESS BETWEEN 2010 AND 2020



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.⁴² These correction factors are likely to be different by travel mode, age group and country.

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.⁴³

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, 10 and 11, the numbers of seriously injured according to the prevailing national definitions are used. Serious injuries data are available in the Annexes.

⁴² SafetyCube (2016), Practical guidelines for the registration and monitoring of serious traffic injuries, Deliverable 7.1, <https://goo.gl/hWHPCG>

⁴³ Ibid

02

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

In 2018, the European Commission announced the first target for reducing serious road traffic injuries, by 50% between 2020 and 2030. The announcement followed the adoption of the Valletta Declaration on road safety in 2017 by EU transport ministers which had called for such a target.

In 2020, the European Commission updated the estimated number of serious road traffic injuries – according to this, 120,000 people were seriously injured on EU27 roads in 2019 based on the common EU definition of what constitutes a serious road injury - an in-patient with an injury level of MAIS3 or more (see box).⁴⁷

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

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).

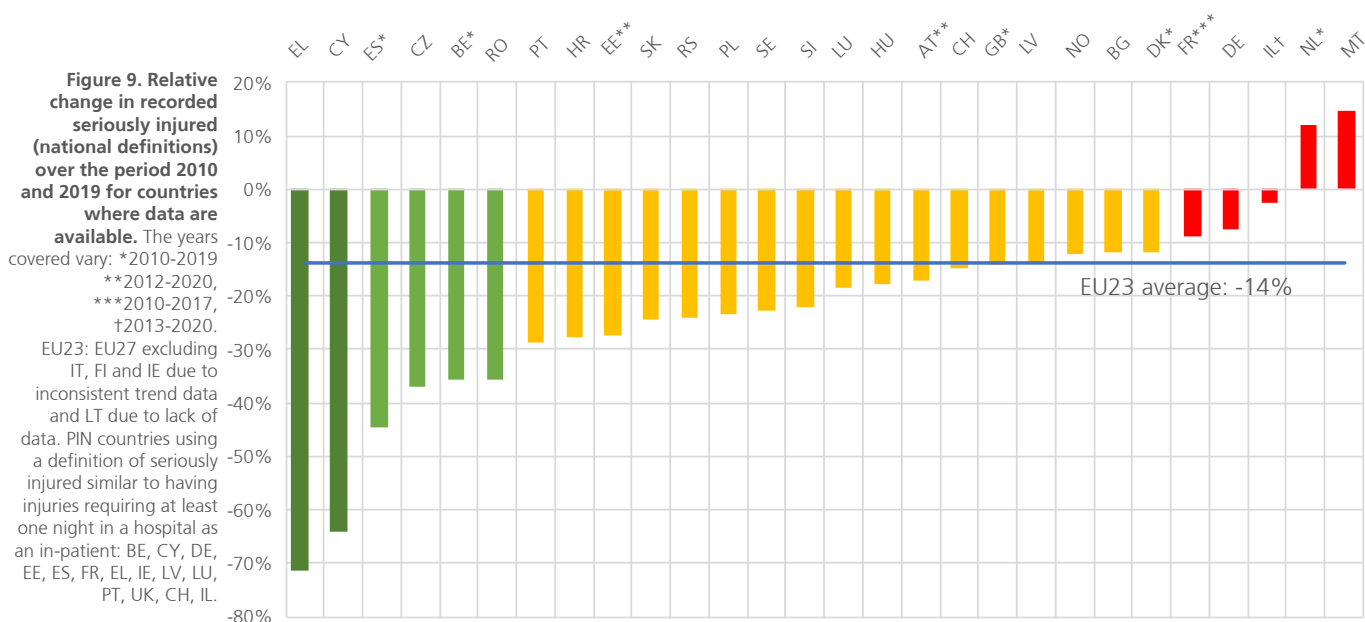
In most PIN countries, the number of people seriously injured in road collisions according to the national definition is recorded by the police.

⁴⁷ European Commission (2020), Road Safety: Europe's roads are getting safer but progress remains too slow, <https://bit.ly/37GXvw6>

Fig.9 shows the relative change in the number of serious injuries over the period 2010-2020 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 26 out of 28 PIN countries that collect data. In the EU23 collectively, serious road traffic injuries

dropped by 14% over the period 2010-2020 (Fig.9). Numbers of serious road traffic injuries in the EU as a whole stagnated during most of the decade, to suddenly drop in 2020 during lockdowns. The number of recorded serious injuries went down by 72% in Greece, 64% in Cyprus and 45% in Spain. The number of recorded serious injuries increased by 15% in Malta and 12% in the Netherlands since 2010.



INDICATOR FIG. 9,10 AND 11

It is not yet possible to compare the number of seriously injured between Member States because of the different national definitions of serious injury, together with differing levels of underreporting. It is also too early to use data based on MAIS3+ for comparing countries over time. The comparison therefore takes as a starting point the changes in the numbers of seriously injured (based on each national definition) since 2010 (Fig.9). The changes in these numbers since 2010 are compared to the corresponding changes in the numbers of deaths since 2010 (Fig.11). Fig.10 shows the number of seriously injured road users based on national and MAIS3+ definitions compared to the number of road deaths recorded by the police in PIN countries where data are available.

The numbers of seriously injured were supplied by the PIN panelist in each country. The full dataset, together with the national definitions, are available in the annexes. All PIN countries collect data on "serious" injuries with the exception of Lithuania. The numbers of people seriously injured based on the national definition in 2020 are provisional in Spain, Greece, Portugal and Serbia.

Fourteen countries (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 are 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.

2.3 LARGE DIFFERENCES IN THE NUMBERS RECORDED AS INJURED DUE TO VARYING DATA COLLECTION METHODS AND REPORTING LEVELS

The exact number of people seriously injured in road collisions is not yet known in all EU countries.

Sample studies have shown that the actual number based on the national serious injury definition is often considerably higher than the number officially recorded by the police. In general, the lower the injury severity, the higher the underreporting in collision statistics collected by the police tends to be. The level of underreporting tends also to be higher for pedestrians, cyclists and motorcyclists than for vehicle occupants. This is especially the case when no motor vehicle is involved in a collision. However, serious injury numbers based on the MAIS3+ definition tend to be smaller than those registered by the police as illustrated by data from countries where two data sets, MAIS3+ and police data, are collected (Fig.10). Therefore, serious injury numbers depend on definitions, data collection methodologies and data quality.

Fig.10 shows the number of seriously injured road users based on national and MAIS3+ definitions compared to the number of road deaths recorded by the police in PIN countries where data are available. Data based on national definitions are collected by the police while MAIS3+ data in one way or another are collected based on hospital records (see box MAIS3+ definition). Serious injury comparison with numbers of deaths was done within the SafetyNet project for eight participating countries and the results were published in the report "Estimating the real number of road accident casualties".⁵⁰

The reporting level of serious injuries recorded by the police based on national definitions varies greatly among countries. This can be related to differences in legislation, insurance policy, police resources and the quality of data collection and processing. In some countries, reporting is better because the police have to

attend all collisions with personal injury (e.g. Germany) or because insurance compensation can only be claimed if there is a report by the police.

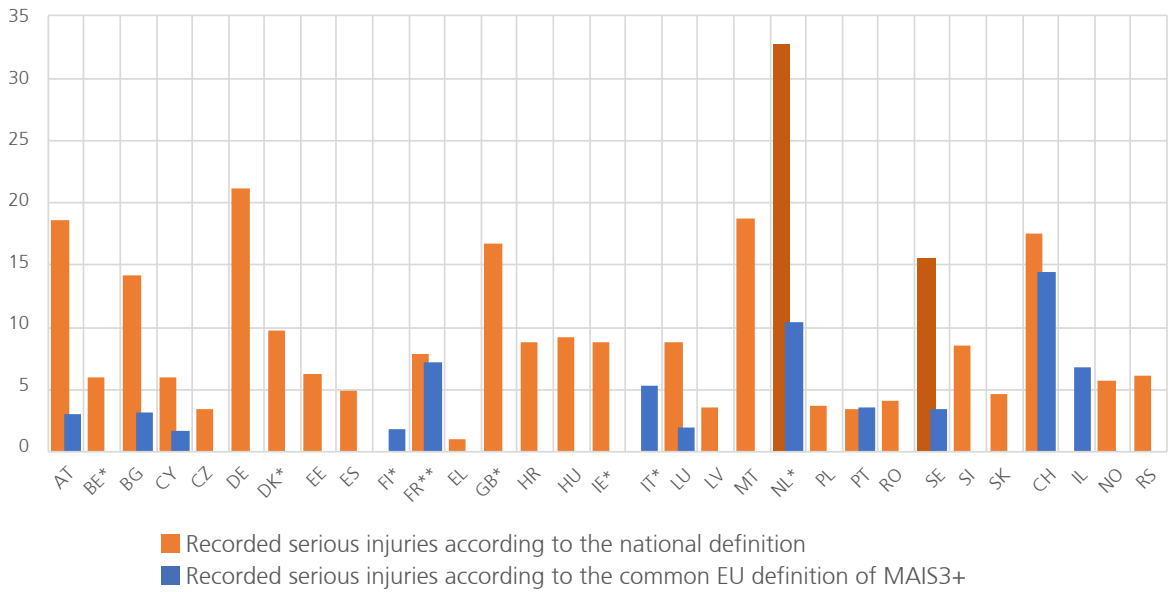
While fewer than one serious injury is registered by the police for every recorded road death in Greece, the ratio is around 21 in Germany and 19 in Malta and Austria (Fig.10). The differences in seriously injured per death do not mean that fewer people are injured for every road death in Greece than in Germany, Malta or Austria but that seriously injured survivors are better reported by the police in the latter countries. Disparities may also stem from differences in travel behaviour: the ratio of injured per death strongly depends on the travel mode. Thus, serious injury numbers are not comparable between countries.

In the SafetyNet report "Estimating the real number of road accident casualties", conversion factors for underreporting in police records were estimated for eight EU countries. It was originally envisaged that the conversion factors would be generalised to other EU countries to allow for European comparison. The authors came to the conclusion however that conversion factors differed too widely among countries and that comparable studies should be conducted in as many countries as possible.

There are around 14 seriously injured people based on MAIS3+ definition for each road death in Switzerland, 10 in the Netherlands, seven in France and Israel, five in Italy, four in Portugal, three in the UK, Sweden, Bulgaria and Austria and two in Luxembourg, Finland and Cyprus (Fig.10 blue bars). As for serious injury based on police records, the differences in serious injury based on MAIS3+ per death do not necessarily mean that fewer people are injured for every road death in Luxembourg, Finland or Cyprus. These countries, as well as other countries are in the process of improving the quality of the MAIS3+ data. The challenge is to capture all serious injuries that occur in traffic collisions, because hospitals record injuries from all causes and, in some cases, apply a different code (ICD).

⁵⁰Broughton et.al. (2008), Estimating the real number of road accident casualties, Final deliverable D.1.15, SafetyNet. Participating countries: Austria, the Czech Republic, France, Greece, Hungary, the Netherlands, Spain and the UK.

Figure 10. Number of seriously injured recorded in national statistics per one road death per country in the last three years ranked alphabetically. Numbers between countries are not comparable. 2018-2020 average or the latest three years available.
 *2017-2019, **2015-2017.
 The years covered for MAIS3+ data vary: AT 2017-2019, CY 2017-2018, FI 2016-2018, FR 2015-2016, LU 2015-2017, PT 2017-2019, UK 2016-2016, CH – 2016-2018. SE (dark brown bar) - hospital data. NL (dark brown bar) - MAIS2+, hospital data.



2.4 ANNUAL REDUCTION IN SERIOUS INJURIES STILL BEHIND ROAD DEATH REDUCTION

Figure 11 Estimated average annual change in the number of seriously injured according to the national definition over the period 2010-2020 for countries where data are available, plotted against the estimated average annual change in road deaths over the same period. EU23: EU27 excluding IT, FI and IE due to inconsistent trend data and LT due to lack of data. The years covered vary: 2010-2020 for BG, CY, CZ, DE, ES, EL, HR, HU, LU, LV, MT, PL, PT, RO, SE, SI, SK, CH, NO and RS. 2010-2019 for BE, DK and UK. 2010-2017 for FR. 2012-2018 for EE and AT. Due to inconsistent data LT, IT, FI and IE could not be included in the figure.

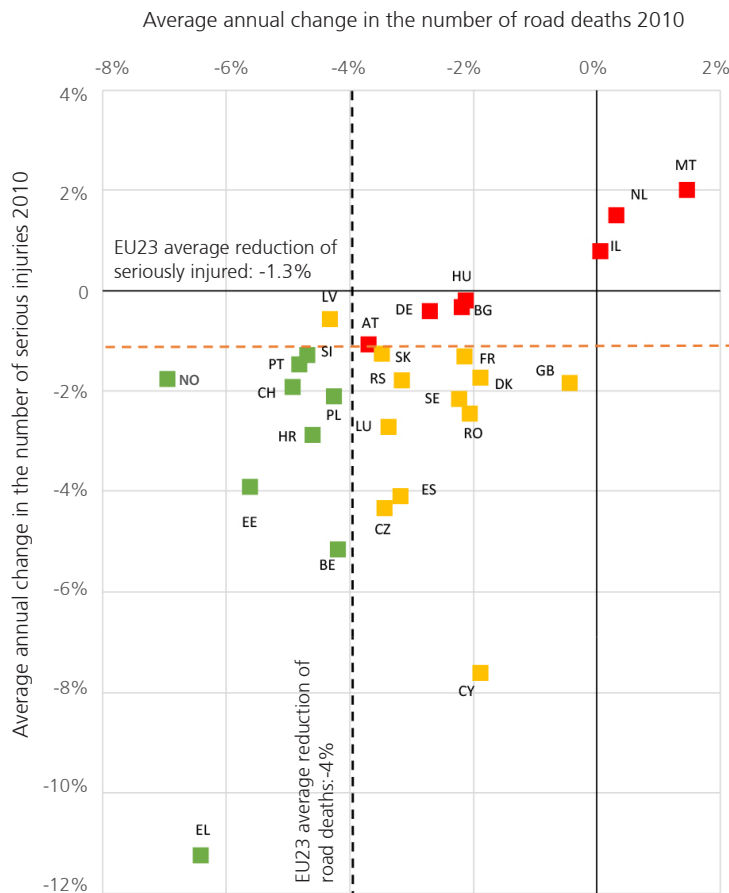


Fig. 11 gives an overview of national progress in reducing the numbers of road deaths and the numbers of serious injuries (based on each national definition) over the last ten years. The figure aims to indicate to what extent the two have moved at a similar pace. The average annual relative change⁵¹ in road deaths is plotted on the horizontal axis, and the average annual relative change in serious injuries on the vertical axis, while the EU averages of -4% and -1.3% respectively are shown by vertical and horizontal dotted lines. Green markers are used for countries that 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, Norway, Belgium, Estonia, Croatia, Poland, Switzerland, Portugal and Slovenia have performed better than the EU average in reducing both serious injuries and road deaths since 2010. The annual reduction rates of serious injuries are also related to reporting rates.

⁵¹The average annual change is based on the entire time series of all the ten annual numbers of deaths between 2010 and 2020, and estimates the average exponential trend. For more information, read the methodological note, PIN Flash 6: [https:// bit.ly/2LVVUyY](https://bit.ly/2LVVUyY)



RECOMMENDATIONS TO THE NATIONAL GOVERNMENTS

- Set national reduction targets for serious injuries 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 effects on numbers of serious injuries in the impact assessment of road safety measures.
- Streamline the emergency response chain and increase the quality of trauma management in order to mitigate collision consequences more effectively.

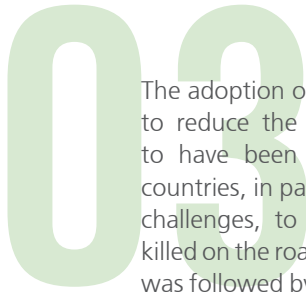
RECOMMENDATIONS TO EU INSTITUTIONS

- Adopt a new joint-EU strategy to tackle serious injuries involving all directorates general 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.

A blurred city street scene with a pedestrian, a cyclist, and a car. The pedestrian is in the foreground, wearing a dark jacket and white boots, carrying a bag. The cyclist is behind her, wearing a dark jacket and riding a bicycle. A dark car is visible in the background. The text is overlaid on the image.

PART III

AN OVERVIEW OF EU
AND NATIONAL ROAD
SAFETY POLICIES



The adoption of the first and second EU targets to reduce the number of road deaths seems to have been a turning point in motivating countries, in particular those facing the greatest challenges, to reduce the number of people killed on the roads. The adoption of these targets was followed by markedly faster progress across the EU than in previous decades. However, the six years of extremely slow progress over the period 2013-2019 signalled an urgent need for renewed action at EU and national level.

3.1 CURRENT EU ROAD SAFETY POLICY DEVELOPMENTS

In May 2018, the European Commission adopted its EU Strategic Action Plan for Road Safety which 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 the number of seriously injured over the same period of time.⁵² It was followed up in June 2019 with the publication of the EU Road Safety Policy Framework 2021-2030, which introduced eight Key Performance Indicators to measure the overall safety performance of EU Member States.⁵³ The EC's new overarching Sustainable and Smart Mobility Strategy published in December 2020 reaffirmed the EU's road safety targets and the political commitment.⁵⁴

The European Parliament is currently preparing its official response – an “Own Initiative Report” on the EU Road Safety Policy Framework 2021-2030, which is due for final adoption in September 2021. It sets political priorities and propose further road safety initiatives at EU and national levels.⁵⁵ The draft prepared by the Rapporteur Ms. Kountoura MEP sets out a strong call for action and says EU targets and goals ‘should be underpinned by a coordinated, well-planned, systematic and well-financed road safety approach at EU, national and local

level’.⁵⁶ There are proposals on taking the EC’s KPI framework forward by ‘setting outcome targets by 2023’. The draft includes a strong section on funding, calling for EU and national funds to implement national road safety programmes and the new 2021-2030 EU Road Safety Policy Framework.

The new “General Safety Regulation” adopted in 2019 comprises a number of updated minimum safety requirements for new vehicles, many of which will come into force starting in 2022.⁵⁷ 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 new vehicles sold on the EU market. New heavy goods vehicles will also have to comply with improved direct vision requirements as of 2026 and be fitted with advanced systems capable of detecting pedestrians and cyclists located in close proximity. Passive safety of cars will also be improved by extending the crash test zone to include the windscreen between the A-pillars for better pedestrian and cyclist protection.

As of 2021, the new minimum Infrastructure Safety Management procedures as set by the revised Directive 2019/1936⁵⁸ will 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.⁵⁹ EU Member States are currently designating the roads which will be covered by the new Directive including the new primary road network. Other main changes under the revised legislation include more transparency, network-wide risk assessment and strengthening the requirements to protect vulnerable road users. Common specifications will also be drawn up for road markings and road signs. Still under preparation are working groups to draft the guidance on vulnerable road user safety and forgiving and self-explaining roads.

⁵² European Commission (17.5.2018), Europe on the Move, Sustainable Mobility for Europe: Safe, Connected and Clean, <https://bit.ly/3cGFD7b>

⁵³ European Commission (19.6.2019), Commission Staff Working Document, EU Road Safety Policy Framework 2021-2030, Next steps towards “Vision Zero”, <https://bit.ly/3vgWTHt>

⁵⁴ European Commission (9.12.2020), Sustainable and Smart Mobility Strategy, <https://bit.ly/2XxH8MZ>

⁵⁵ European Parliament, Draft report on EU Road Safety Policy Framework 2021-2030 – Recommendations on next steps towards “Vision Zero”, <https://bit.ly/3uL5kKb>

⁵⁶ Ibid

⁵⁷ Regulation (EU) 2019/2144 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>

⁵⁸ Directive (EU) 2019/1936 of the European Parliament and of the Council of 23 October 2019 amending Directive 2008/96/EC on road infrastructure safety management <https://eur-lex.europa.eu/eli/dir/2019/1936/oj>

⁵⁹ ETSC (2019), European Transport Safety Council welcomes deal on safer EU road rules, <https://bit.ly/302foTa>

The EU Sustainable and Smart Mobility Strategy includes the intention to update the rules of cross-border enforcement of traffic offences, vehicle roadworthiness, automated vehicles, and driving licences and a proposal to add eCall automated emergency calling devices to motorcycles, trucks and buses are among a major package of new legislative measures for the transport sector announced in the strategy.⁶⁰ The European Commission also says it will work on new guidance on Blood Alcohol Limits and alcohol interlocks, again reaffirming the actions detailed in the original EU Road Safety Strategy as well as exploring the possibility of adopting a recommendation in other areas, for example speed.⁶¹ A number of other non-binding initiatives were also announced in the field of sustainable urban mobility with a revised urban mobility strategy due in 2021.

The European Commission has also said it will assess the need for a new agency “to support safe, smart and sustainable transport operations”. ETSC has been calling for such an agency for some time to increase capacity on road safety management at EU level and particularly to oversee the safe rollout of automated vehicles through market surveillance, real-world testing and in-depth crash investigation.

The European road safety strategy is also part of a more extensive global strategy to combat road collisions, set out in the Stockholm Declaration of February 2020.⁶² The Stockholm Declaration connects road safety to the implementation of the 2030 UN Agenda for Sustainable Development.

⁶⁰ Ibid

⁶¹ Conclusions of Executive Seminar on speed and speed management, <https://bit.ly/3vKSz3j>

⁶² Stockholm Declaration (February 2020) Third Global Ministerial Conference on Road Safety: Achieving Global Goals 2030 <https://bit.ly/2U9fIM1>



RECOMMENDATIONS TO THE EUROPEAN COMMISSION

- Create a new agency to support safe, smart and sustainable transport operations.

Within the context of the EU Road Safety Policy Framework 2021-2030:

- Adopt a long-term operational plan for 2030, including clearer priority measures for action, investments and a timetable against which performance is measured and delivery made publicly accountable by specific bodies.
- Introduce specific measures to reduce serious injuries, in light of the new target.
- Develop legislation, where appropriate, instead of unenforceable voluntary commitments.
- Recognise the need to prepare the revision of the EU's existing road safety legislation on vehicle and infrastructure safety in the medium term (e.g. in 2025).
- Implement the EU Road Safety Strategy within the context of changing mobility patterns including new trends such as automation, increased walking and cycling due to promotion of active travel, innovations like electric scooters and an ageing population.
- Extend the application of the instruments of the Road Infrastructure Safety Management Directive to cover all EU co-financed roads and all primary roads including all main rural and main urban roads.
- Urge EU Member States to designate the maximum number of primary roads to deliver on the estimated number of deaths and serious injuries prevented by the new Road Infrastructure Safety Management Directive.

Following the adoption of the revision of the General Safety Regulation (GSR) on new minimum safety standards for new vehicles:

- Deliver on the estimated number of deaths and seriously injured to be prevented by adopting strong secondary legislation implementing the General Safety Regulation.⁶³
- Work with Member States to enable the necessary conditions for the functioning of overridable Intelligent Speed Assistance, including regarding the availability of speed limits in a digital format.

- Consider the feasibility and acceptability of non-overridable Intelligent Speed Assistance in the future.

Within the context of the revision of the Cross-Border Enforcement Directive 2015/413:⁶⁴

- Strengthen the enforcement chain, including mandatory notification of the owner of the vehicle by the country where the offence took place.

Within the context of the revision of the Driving Licence Directive 2006/126:⁶⁵

- Ensure that the Directive remains valid for new technologies and autonomous and semi-autonomous driving.
- Adopt a graduated licensing system that encourages young people to gain more experience while limiting certain high-risk activities such as driving at night and with passengers.⁶⁶
- Develop and promote evidence-based guidelines for family doctors and other medical professionals involved in assessing the functional capabilities of someone suspected of being an unfit driver.⁶⁷

Within the context of the EU strategy on automated mobility:⁶⁸

- Develop a coherent and comprehensive EU regulatory framework for the safe deployment of automated vehicles.⁶⁹
- 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.⁷⁰

⁶³ Regulation (EU) 2019/2144 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>

⁶⁴ 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/iZgQys>

⁶⁵ Directive 2006/126/EC of the European Parliament and of the Council of 20 December 2006 on driving licences, <https://goo.gl/cDJt8i>

⁶⁶ Ibid

⁶⁷ ETSC (2021), PIN Flash 40, Are medical fitness to drive procedures fit for purpose? www.etsc.eu/pinflash40

⁶⁸ 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>

⁶⁹ ETSC (2016), Prioritising the Safety Potential of Automated Driving in Europe, <https://goo.gl/TojCUL>

⁷⁰ Ibid

3.2 NATIONAL ROAD SAFETY STRATEGIES TO 2030 UNDER PREPARATION OR ADOPTED

Country efforts will be critical across Europe for the implementation of the Safe System

approach and in the EU for achieving the 2030 targets. Of the 32 PIN countries, nearly all reported having a new road safety strategy either in place or under development for the decade to come (Table 1).

Table 1. Road safety strategies in the PIN countries. †HR - serious road collision target, not serious injury target

	New National Road Safety Strategy YES/NO	Time period the new strategy will cover	Road death reduction target	Serious injury reduction target
AT	Under development	2021-2030	50% (2017-2019av.-2030)	50% (2017-2019av.-2030)
BE	Under development	2021-2030	Under development	Under development
BG	YES, finalised	2020-2030	50%	50%
CY ⁷¹	YES, finalised	2021-2030	50% (2019-2030)	50% (2019-2030)
CZ	YES, finalised	2021-2030	50% (2017-2019av.-2030)	50% (2017-2019av.-2030)
DE ⁷²	YES, finalised	2021-2030	40% (2021-2030)	NO
DK ⁷³	YES, finalised	2021-2030	Max 90 road deaths in 2030	Max 900 seriously injured in 2030
EE ⁷⁴	Current	2016-2025	52% (2016-2025)	31% (2016-2025)
EL	Under development	2021-2030	50% (2019-2030)	50% (2019-2030)
ES	Under development	2021-2030	50% (2019-2030)	50% (2019-2030)
FI	Under development	2022-2026 (tbd)	YES (tbd)	YES (tbd)
FR	Current	2018-2021	50% (2019-2030)	50% (2019-2030)
HR	Under development	2021-2030	50% (2019-2030)	50% (2019-2030)†
HU	Current	2020-2022	NO	NO
IE	Under development	2021-2030	50% (2017-2019av.-2030)	50% (2017-2019av.-2030)
IT	Under development	2021-2030	50% (2017-2019av.-2030)	50% (MAIS3+) (2017-2019av.-2030)
LU ⁷⁵	Current	2019-2023	NO (Vision Zero)	NO (Vision Zero)
LV ⁷⁶	Under development	2021-2027	NO (Vision Zero)	NO (Vision Zero)
LT ⁷⁷	YES, finalised	2020-2030	50% (2019-2030)	NO
MT	Current	2014-2024	NO	NO
NL ⁷⁸	NO, Activity Plans instead of a strategy, finalised	2018-2030	NO	NO
PL	Under development	2021-2030	50% (2019-2030)	50% (2019-2030)
PT ⁷⁹	Under development	2020-2030	50%	50%
RO	Under development	n/a	NO	NO
SE	NO, management by objectives	2020-2030	50% (2017-2019av.-2030)	25% (2017-2019av.-2030)
SI ⁸⁰	Current	2013-2022	50% (2011-2020)	50% (2011-2020)
SK	Under development	2021-2030	50% (2021-2030)	50% (2021-2030)
UK ⁸¹	NO, Road Safety Statement 2019	June 2019-June 2021	NO	NO
CH	Current	No time limit	Max 100 road deaths by 2030	Max 2,500 serious injuries by 2030
IL	YES, finalised	2020-2030	50% (2021-2030)	50% (2021-2030)
NO ⁸²	Current	2018-2021	Max 50 deaths by 2030	Max. 350 deaths and serious injuries by 2030
RS	Under development	2021-2025 or 2030	YES (tbd)	YES (tbd)

⁷¹ Στρατηγικό Σχέδιο, <https://bit.ly/3ifxSbY>

⁷² Verkehrssicherheitsprogramm 2021 bis 2030, <https://bit.ly/2TwVT3K>

⁷³ Road Safety Commission, 2021-2030 Action Plan, Summary, <https://bit.ly/3cdYuGA>

⁷⁴ Transpordiamet, Lehekülge ei leitud, <https://bit.ly/34FvRxl>

⁷⁵ Plan d'action « sécurité routière » (2019-2023), <https://bit.ly/3vMmkkh>

⁷⁶ Satiksmes ministrija, Ceļu satiksmes drošības plāns 2021.-2027.gadam, <https://bit.ly/3g3t3Qp>

⁷⁷ Lietuvos Respublikos Vyriausybė (2020), Nutarimas dėl valstybinės eismo saugos programos „Vizija-nulis“ patvirtinimo, <https://bit.ly/34FqaQx>

⁷⁸ Veilig van deur tot deur, <https://bit.ly/3caBgRy>

⁷⁹ Estratégia Nacional de Segurança Rodoviária 2021 / 2030, <https://visaozero2030.pt/>

⁸⁰ Resolucija o nacionalnem programu varnosti cestnega prometa za obdobje od 2013 do 2022 (ReNPVC13-22), <https://bit.ly/2SQOs7I>

⁸¹ Department for Transport, The Road Safety Statement 2019, A Lifetime of Road Safety, <https://bit.ly/3yVeVkk>

⁸² Meld. St. 20 (2020-2021), Melding til Stortinget Nasjonal transportplan 2022-2033, <https://bit.ly/2TuDLrm>

3.3 KPI DATA COLLECTION ACROSS THE PIN COUNTRIES

The EU's Road Safety Policy Framework 2021-2030 introduced, for the first time, a list of Key Performance Indicators (KPIs) which will be used to measure overall road safety performance in the coming decade. The KPIs were further detailed in the EU Strategic Action plan on Road Safety.⁸³

In an initial phase, eight have been chosen which will form the basis for monitoring progress in the joint road safety work at EU, Member State, regional and local level. The EC will analyse the data together with Member State experts and report on it. The aim is to continue strengthening the existing KPIs and to develop additional ones.⁸⁴ To facilitate the work on data collection, the European Commission has offered financial support to Member States. The long term goal is to collect comparable data, bearing in mind that some differences in national rules will constrain comparison for some indicators. Countries outside the EU may well find it helpful to adopt or adapt these KPIs and follow the EU monitoring and thus benefit from the experience gained by the participating Member States.

The eight EU KPIs are:

1. Speed compliance
2. The use of safety belts and child restraint systems
3. The use of protective equipment
4. Driving under the influence of alcohol
5. Driver distraction by handheld devices
6. Safety of new cars
7. Infrastructure safety
8. Post-crash care

Key Performance Indicators can give a more complete picture of the level of road safety than just numbers of road deaths and serious injuries and can detect the emergence of problems at an earlier stage.⁸⁵

The "Baseline" project supported by the European Commission and coordinated by the Vias institute was launched in 2020 to produce values for the EU Road Safety KPIs in the 19 participating Member States. Each participating country will provide between one and eight national KPI values that are comparable across countries and meet the minimum methodological requirements of the European Commission.⁸⁶ Participating Member States are indicated in Table 2.

There is still a way to go in terms of developing some of these KPIs, collecting the data and setting KPI targets (Tables 2 and 3). The KPI on safety belts seems the most advanced, with 30 PIN countries reporting they collect or are planning to collect data in the upcoming year for this KPI. Likewise, KPIs for speed compliance, the use of protective equipment, alcohol and distraction are or soon will be widely used. The infrastructure, post-crash care and vehicle safety KPIs seem the least well advanced.

Until now, countries have been applying different methodologies in collecting KPI data. The level of detail of each KPI and the frequency of how often KPI data are collected differ between countries.

RECOMMENDATION TO THE NATIONAL LEVEL ON NATIONAL ROAD SAFETY STRATEGIES AND KPIs

- In EU Member States, fast track data collection for the Key Performance Indicators included in the EU Road Safety Policy Framework 2021-2030 and report them to the European Commission.
- For countries who have not done it yet: set targets to halve the number of road deaths and serious injuries over the period 2020-2030 in line with the EU Road Safety Policy Framework 2020-2030.
- Set ambitious national KPI targets.
- Allocate as soon as possible the necessary budget to collect data in 2020 and beyond.

RECOMMENDATION TO THE EUROPEAN COMMISSION ON KPIs

- In the medium term, set the KPI outcome targets to match the outcome performance of the three best performing countries for each KPI (when possible).
- Publish updated data regularly, at least every two years, ahead of the EU Results conference.
- Extend and improve the current KPIs based on ETSC recommendations.⁸¹
- Support Member States in collecting harmonised data.

⁸¹ ETSC (2019), Briefing: EU Strategic Action Plan on Road Safety, <https://bit.ly/3ihmcW7>

⁸³ ETSC (2019), Briefing EU Strategic Action Plan on Road Safety, <https://bit.ly/36Ua5Xe>

⁸⁴ Ibid

⁸⁵ ETSC (2018) Briefing: 5th EU Road Safety Action Programme 2020-2030. <https://bit.ly/2LuTDBW>

⁸⁶ Baseline project, <https://baseline.vias.be/>

Table 2. Progress towards collecting EU KPIs and setting KPI targets.

Green = the KPI data are being collected or will be collected in the near future, red = the KPI data are not being collected, yellow = to be decided and n/a = the information was not available at the time this report went to print.

	BASELINE PROJECT PARTICIPATION	SPEED	SPEED TARGET	SAFETY BELT	SAFETY BELT TARGET	PROTECTIVE EQUIPMENT	PROTECTIVE EQUIPMENT TARGET	ALCOHOL	ALCOHOL TARGET
AT	YES	YES	tbd	YES	tbd	YES	tbd	YES	tbd
BE	YES	YES	n/a	YES	n/a	YES	n/a	YES	n/a
BG	YES	YES	n/a	YES	n/a	YES	n/a	YES	n/a
CY	YES	YES	NO	YES	NO	YES	NO	YES	NO
CZ	YES	YES	YES	YES	YES	YES	YES	YES	YES
DE	YES	NO	NO	YES	NO	YES	NO	YES	NO
DK	NO	YES	NO	YES	NO	YES	NO	NO	n/a
EE	NO	YES	YES	YES	YES	YES (bicycle)	YES	YES	YES
ES	YES	YES	tbd	YES	tbd	YES	tbd	YES	tbd
EL	YES	YES	tbd	YES	tbd	YES	tbd	YES	tbd
FI	YES	YES	tbd	YES	tbd	YES	tbd	YES	tbd
FR	NO	YES	n/a	YES	n/a	YES	n/a	YES	n/a
HR	NO	YES	n/a	YES	n/a	YES	n/a	YES	n/a
HU	NO	NO	NO	YES	NO	YES	NO	YES	NO
IE	YES	YES	tbd	YES	tbd	YES	tbd	YES	tbd
IT	NO	NO	tbd	NO	tbd	NO	tbd	NO	tbd
LU	YES	YES	tbd	YES	tbd	YES	tbd	YES	tbd
LV	YES	YES	n/a	YES	n/a	YES	n/a	YES	n/a
LT	YES	YES	n/a	YES	n/a	n/a	n/a	YES	n/a
MT	YES	YES	tbd	YES	tbd	YES	tbd	YES	tbd
NL	YES	YES	tbd	YES	YES	NO	n/a	YES	n/a
PL	YES	YES	NO	YES	NO	YES	NO	YES	NO
PT	YES	YES	n/a	YES	n/a	YES	n/a	YES	n/a
RO	NO	NO	NO	NO	NO	NO	NO	NO	NO
SE	YES	YES	YES (tbd)	YES	YES (tbd)	YES	YES (tbd)	YES	YES (tbd)
SI	NO	YES	YES	YES	YES	YES	NO	YES	YES
SK	YES	YES	n/a	YES	n/a	YES	n/a	YES	n/a
UK	Not applicable	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
GB	Not applicable	YES	n/a	YES	n/a	YES	n/a	YES	n/a
CH	Not applicable	YES	NO	YES	NO	YES	NO	NO	NO
IL	Not applicable	YES	YES (tbd)	YES	YES (tbd)	NO	YES (tbd)	YES	YES (tbd)
NO	Not applicable	YES	YES	YES	YES	YES (bicycle)	YES	YES	YES
RS	Not applicable	YES	n/a	YES	n/a	YES	n/a	YES	n/a

Table 3. Progress towards collecting EU KPIs and setting KPI targets. Green = the KPI data are being collected or will be collected in the near future, red = the KPI data are not being collected, yellow = to be decided
n/a = the information was not available at the time this report went to print.

	DISTRACTION	DISTRACTION TARGET	VEHICLE SAFETY	VEHICLE SAFETY TARGET	INFRASTRUCTURE	INFRASTRUCTURE TARGET	POST-CRASH CARE	POST-CRASH CARE TARGET
AT	YES	tbd	YES	tbd	tbd	tbd	YES	tbd
BE	YES	n/a	YES	n/a	YES	n/a	YES	n/a
BG	YES	tbd	YES	tbd	tbd	tbd	tbd	tbd
CY	YES	NO	YES	NO	YES	NO	YES	YES
CZ	YES	YES	YES	YES	YES	YES	YES	YES
DE	NO	NO	NO	NO	NO	NO	YES	NO
DK	YES	NO	NO	NO	NO	NO	NO	NO
EE	YES	YES	NO	NO	tbd	tbd	NO	tbd
ES	YES	tbd	YES	tbd	YES	tbd	YES	tbd
EL	YES	tbd	YES	tbd	NO	tbd	YES	tbd
FI	YES	tbd	YES	tbd	YES	tbd	tbd	tbd
FR	YES	n/a	YES	n/a	NO	n/a	NO	n/a
HR	YES	n/a	YES	n/a	YES	n/a	YES	n/a
HU	YES	NO	NO	n/a	tbd	NO	NO	n/a
IE	YES	tbd	YES	tbd	NO	tbd	tbd	tbd
IT	NO	tbd	YES	tbd	tbd	tbd	NO	tbd
LU	YES	tbd	NO	tbd	NO	tbd	tbd	tbd
LV	YES	n/a	YES	n/a	YES	n/a	YES	n/a
LT	YES	n/a	YES	n/a	YES	n/a	YES	n/a
MT	YES	tbd	NO	NO	NO	NO	NO	NO
NL	YES	n/a	YES	n/a	YES	n/a	YES	n/a
PL	YES	NO	NO	NO	NO	NO	NO	NO
PT	YES	n/a	YES	n/a	YES	n/a	YES	n/a
RO	NO	NO	NO	NO	NO	NO	NO	NO
SE	YES	n/a	YES	n/a	YES	n/a	YES	n/a
SI	NO	NO	NO	NO	NO	NO	NO	NO
SK	YES	NO	YES	NO	NO	NO	NO	NO
UK	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
GB	YES	n/a	n/a	n/a	NO	NO	n/a	n/a
CH	YES	NO	NO	NO	NO	NO	NO	NO
IL	YES	NO	NO	YES	NO	NO	NO	NO
NO	YES	n/a	YES	YES	YES	YES	NO	n/a
RS	YES	n/a	NO	n/a	NO	n/a	NO	n/a

PART IV

GREECE WINNER OF 2021 ROAD SAFETY PIN AWARD

GREECE

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INTERVIEW WITH KOSTAS KARAMANLIS, GREEK MINISTER OF INFRASTRUCTURE AND TRANSPORT



ETSC: Which measures yielded the best road safety results and helped achieve the target to halve the number of road deaths over the period 2010-2020?

The significant decrease of road deaths in Greece over the last decade is the result of a increased efforts in all aspects of road safety by the public authorities and all road safety stakeholders. Since the start of its mandate, in July 2019, our government undertook a number of initiatives regarding road safety. We have also seen improvements in driver behaviour.

The most important road safety activities in Greece are highlighted below:

Road safety management

- The National road safety strategic plan 2011-2020 guided policy, programmes, measures and interventions.
- The Inter-Ministerial Committee on Road Safety was re-established in 2010 under the chairmanship of the Prime Minister since 2014 and assisted by the National Road Safety Council.

Infrastructure

- The Ministry of Infrastructure and Transport improved the main road network in Greece (from 750 km of motorways in 2007 to 2.100 km at the end of 2017). Traffic from unsafe interurban roads has moved to new, safer, motorways.

- The EU Road Infrastructure Safety Management Directive has been in force since 2012.

Enforcement

- Traffic police statistics indicate a steadily increasing number of checks and infractions during the last decade.

- Safety cameras for speeding infractions are being used more often and more efficiently.

Road user behaviour

- In 2007, a lower limit (0.2 g/l) than the default (0.5 g/l) for Blood Alcohol Concentration has been in place for professional drivers (heavy goods vehicles, school buses and coaches), novice drivers (holding the driving license for less than two years), motorcyclists and moped riders was introduced.

- In 2008, the Ministry of Infrastructure and Transport introduced vehicle technical inspection run by private entities, which has proven very effective.

- In 2018, a new scheme for traffic violations was introduced in the Greek Highway Code. Three categories of fines were set, based on the severity of the respective violations: low (€0-300), medium (€301 – 600) and high (>€600) risk. Furthermore, fines according to income criteria were introduced: offenders with an annual income between €50.001 – 100.000 are subject to double fines, while offenders with an annual income above €100.000 are subject to triple fines. Finally, offenders that commit a high-risk violation three times in five years lose their license for life.

ETSC: Where is Greece at with regard to serious injury data collection based on the common EU definition of MAIS3+?

MAIS3+ road injury data are not available for Greece yet. Even though hospital patient registries have been upgraded, road casualties are still not being properly reported. The competent authorities are working on the changes needed.

ETSC: Speed is among the main killers on the road. ETSC's report on traffic law enforcement revealed that speed enforcement levels in Greece are among the lowest in the EU. What measures are Greek authorities taking to tackle the issue? Are there automated safety cameras to enforce speed? What else will be done?

Automated safety cameras play a pivotal role in supervising our road network. Tackling speeding is one of our top priorities and we are particularly glad that the ETSC has set it as a priority of the Road Safety Exchange Program 2018-2021, in which we participate.

Our Government is currently developing a comprehensive action plan on speeding through a multi-faced approach including:

- a new Highway Code foreseeing new and more realistic fines for speeding;
- more systematic speeding enforcement by exploiting electronic means (cameras, etc.);
- revision of speed limits on the rural road network;
- introduction of 30km/h speed limit zones in cities;
- national and local campaigns against speeding.

ETSC: How is Greece tackling the problem of drink-driving?

As with speeding, several actions are foreseen in the new Road Safety Strategic Plan for tackling drinking-driving, including targeted enforcement and awareness campaigns in touristic areas. Alcohol interlocks are under consideration.

ETSC: How do municipalities take responsibility for improving road safety

in Greece? Will the new mobility and safety plans which have been introduced by several municipalities be applied by all in the future?

The new Mobility Law of March 2021 is expected to boost Sustainable Urban Mobility Plans (SUMPs), with several new provisions for traffic and road infrastructure safety upgrades. Most Greek cities have laid out their own Urban Mobility Plans. Slow traffic zones and protection of pedestrians, cyclists and motorcyclists are key ingredients in these new urban mobility schemes. Furthermore, benchmarking through Road Safety Key Performance Indicators (also with EU support) will trigger competition on safe mobility between cities.

ETSC: How is the safety of pedestrians and cyclists addressed in Greece?

Pedestrian crash statistics in Greece are close to the EU average, whereas cyclists crashes are quite below the EU average. Until now protection of pedestrians and cyclists was not high on most cities' agendas, however recent legislation foresees a new and supportive legal framework for traffic and infrastructure provisions (also for micro-mobility).

ETSC: What measures will be taken to support compliance with the new 30 km/h limits set in urban areas?

In our view, social acceptance is key for the success of 30 km/h speed limits in urban areas, so any attempt should be gradual and properly supported. In order to support this culture change, public awareness is key at national but most importantly at local level. To this end, more systematic speeding enforcement control will also be very efficient.

ETSC: One third of those killed on the road in Greece are powered-two-wheeler users (PTW). Helmet wearing rates among PTW riders remain very low. According to the Technical University of Athens, if helmet wearing rates increased to 95%, 200 lives could be saved every year. How safety of power two wheelers (PTWs) is addressed in Greece?

PTWs safety is one of the most significant crash factors in Greece, representing 36% of fatalities, double the EU average. The key reasons for this are the increased number of PTWs but also speeding, reckless behaviour and insufficient helmet wearing rates (especially in cities and by PTW passengers). The road safety strategic plan of our Government puts PTW safety high on the agenda and we are currently developing a comprehensive action plan that requires a more systematic enforcement of helmet wearing and PTW speeding, together with a more efficient fine management system?

ETSC: Greece is preparing the National Road Safety strategy 2021-2030. Which targets will you adopt? How will you ensure smooth coordination between the different authorities responsible for implementation? How sufficient funding has been secured for the implementation of the programme and from which sources it has been earmarked?

The Ministry of Infrastructure and Transport is preparing the National Strategic Plan for Road Safety. The new Strategy has adopted the Safe System Approach and the long-term Vision Zero road fatalities by 2050. In addition, the quantitative targets of the Greek Road Safety Strategy are aligned with the EU targets for reducing the number of fatalities and serious injuries in crashes by 50% by 2030.

A National Road Safety Fund will be established, a legal entity under the supervision of the Ministry of Interior, for securing the relevant resources over the ten-year implementation of the Road Safety Strategy. The resources of the National Road Safety Fund will be secured from existing road safety fees from technical inspections, traffic violations fines, European funds, the national budget, as well as from public and private sector cooperation programmes.

ETSC: The European Commission's Road Safety Policy Framework 2021-2030 includes eight Key Performance Indicators (KPIs). Which elements of the overall policy framework were particularly welcomed by Greece and which do you believe will be more of a challenge? Which KPI data is Greece planning to collect?

Greece has already adopted the Safe System

approach as the fundamental principle of the road safety strategy for the next decade, including all components of the European Commission's Road Safety Policy Framework. Among the Government's priorities are the collection of KPIs, specific projects on road infrastructure improvement and the provision of vehicle fleet renewal incentives. The promotion of new and safer mobility patterns is also a priority.

Greece plans to collect all KPIs suggested: speeding, use of seat belts and child restraint systems, use of helmet, sober-driving, driver distraction, vehicle safety and post-crash care. It will be the first ever systematic collection of road safety KPIs. Consequently, we will have a better insight into road safety issues in Greece.

ETSC: Greece is participating in the EU Road Safety Exchange project financed by the European Parliament, managed by the European Commission and implemented by ETSC. Which ideas from the partner countries could be implemented in Greece?

The EU Road Safety Exchange project has been quite useful for Greece. I am highlighting two ideas from the partner countries which have been incorporated in our national strategy:

- The comprehensive strategy and set of actions for the improvement of road safety for motorcycles and mopeds, presented by the Spanish authorities;
- The speed management policy of the French authorities, including the reduction of speed limits on roads outside built-up areas, the respective awareness campaigns and the efficient management of the traffic violation fines.

ETSC: Greece received financing from the European Investment Bank (EIB) to make road infrastructure safety upgrades. How will Greece ensure there are enough funds available to implement necessary changes to further improve infrastructure safety?

The EIB funding concerns road safety improvement at 7,000+ of the most dangerous sites, located across 11 regions of Greece. The intervention process has started and great safety benefits are expected within the coming two years.

ETSC: Greece is home to very active road safety NGOs that deliver important campaigns and training programmes. How will Greece continue to support these important grass-roots organisations?

The Greek Government and all public authorities embrace the highly valuable efforts of the various road safety NGOs. They reach out to people in a more direct and efficient manner and, thus, are highly appreciated by the civil society. Our Ministry is intending to further support all road safety activities of these NGOs.

ETSC: What are the top three road safety challenges Greece faces today? How are you planning to address them in the short term?

The top three road safety priorities for Greece are:

Safety of powered two wheelers. We are preparing an integrated action plan, focusing on the reduction of PTW collisions: systematic traffic law enforcement and awareness campaigns in order to increase helmet use, proper adjustments of road infrastructure, improvement of the driving licence system and provision of incentives to PTW users for acquiring protective equipment.

Speeding is also a key priority. A comprehensive action plan is being prepared, comprising systematic traffic law enforcement with more speed controls, setting appropriate speed limits on interurban roads based on related studies, reduction of speed limits on urban roads to 30km/h, low-cost road engineering measures and systematic information and education of drivers on the consequences of speeding.

Efficient enforcement. Realistic violation fines along with continuous enforcement are the new guidelines which are expected to change drivers behaviour and improve road safety in Greece.

ETSC: Which countries can be an example for Greece when looking for inspiration for your future road safety work and why?

A lot has already been achieved in improving road safety in Greece, but a lot remains to be done. Many countries could serve as an example, whether it is Spain and its integrated PTW safety action plan, France and its speed management

policy or Sweden and its Vision Zero approach, all of them recipients of the ETSC Award in the past.

Greece achieved the 2010-2020 target of reducing road deaths by 50% (with an actual performance of -54%). We hope we can do even better during the current decade 2020-2030!

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
Great Britain	GB
Israel	IL
Norway	NO
Serbia	RS
Switzerland	CH

Table 1 (Fig.2,3) Road deaths and relative change in road deaths between 2010 and 2020 and between 2019 and 2020.

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020		Fig.2 2010-2020		Fig.3 2019-2020
AT	552	523	531	455	430	479	432	414	409	416	344	NO	-55.3%	BG	-26.3%
BE*	850	884	827	764	745	762	670	609	604	646	484	EL*	-54.0%	BE*	-25.1%
BG	776	658	605	601	655	708	708	682	611	628	463	PT*	-47.2%	MT	-25.0%
CY	60	71	51	44	45	57	46	53	49	52	48	ES*	-44.9%	IT*	-24.7%
CZ	802	773	742	654	688	737	611	577	658	617	517	HR	-44.4%	HU	-22.9%
DE*	3,651	4,009	3,601	3,340	3,368	3,459	3,206	3,177	3,275	3,059	2,724	BE*	-43.1%	ES*	-22.2%
DK*	255	220	167	191	183	178	211	183	175	199	155	SI	-42.0%	DK*	-22.1%
EE	79	101	87	81	78	67	71	48	67	52	60	IT*	-41.9%	FR	-21.7%
ES*(1)	2,478	2,060	1,903	1,680	1,688	1,689	1,810	1,830	1,806	1,755	1,366	LT	-41.5%	SI	-21.6%
FI*	272	292	255	258	229	270	258	238	239	211	221	BG	-40.3%	PT*	-20.9%
FR	3,992	3,963	3,653	3,268	3,384	3,461	3,477	3,448	3,248	3,244	2,541	DK*	-39.2%	HR	-20.2%
EL*	1,258	1,141	988	879	795	793	824	731	700	688	579	AT	-37.7%	AT	-17.3%
HR	426	418	393	368	308	348	307	331	317	297	237	HU	-37.3%	CZ	-16.2%
HU	740	638	605	591	626	644	607	625	633	602	464	FR	-36.3%	EL*	-15.8%
IE‡	212	186	163	188	192	162	182	155	137	140	149	PL	-36.2%	PL	-14.4%
IT*	4,114	3,860	3,753	3,401	3,381	3,428	3,283	3,378	3,334	3,173	2,390	LV	-36.2%	IL	-14.1%
LU	32	33	34	45	35	36	32	25	36	22	26	CZ	-35.5%	NO	-13.9%
LV	218	179	177	179	212	188	158	136	148	132	139	SK	-35.1%	RO	-11.7%
LT	299	297	302	258	267	242	192	192	173	186	175	RO	-30.8%	DE*	-11.0%
MT	15	17	9	18	10	11	22	19	18	16	12	CH	-30.6%	UK	-9.5%
NL(2)	640	661	650	570	570	620	629	613	678	661	610	IE*	-29.7%	SK	-8.6%
PL	3,907	4,189	3,571	3,357	3,202	2,938	3,026	2,831	2,862	2,909	2,491	RS	-25.5%	RS	-7.9%
PT*(3)	937	891	718	637	638	593	563	602	675	626	495	DE*	-25.4%	NL	-7.7%
RO	2,377	2,018	2,042	1,861	1,818	1,893	1,913	1,951	1,867	1,864	1,646	EE	-24.1%	CY	-7.7%
SE	266	319	285	260	270	259	270	253	324	221	204	SE	-23.3%	SE	-7.7%
SI	138	141	130	125	108	120	130	104	91	102	80	CY	-20.0%	LT	-5.9%
SK	345	324	296	223	259	274	242	250	229	245	224	MT	-20.0%	FI*	4.7%
UK(4)	1,905	1,960	1,802	1,770	1,854	1,804	1,860	1,856	1,839	1,808	1,636	FI*	-18.8%	LV	5.3%
CH	327	320	339	269	243	253	216	230	233	187	227	LU	-18.8%	IE*	6.4%
IL	375	382	290	309	319	356	377	364	316	355	305	IL	-18.7%	EE	15.4%
NO	208	168	145	187	147	117	135	106	108	108	93	UK	-14.1%	LU	18.2%
RS	660	731	688	650	536	599	607	579	548	534	492	NL	-4.7%	CH	21.4%
EU27	29,691	28,866	26,538	24,296	24,184	24,416	23,880	23,455	23,363	22,763	18,844	EU27	-36.7%	EU27	-17.2%

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

* National provisional estimates used for 2020, as the final figures for 2020 were not yet available this report went to print.

‡IE - provisional data 2018-2020.

(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. 2020 road death data provided by the National Road Safety Authority (ANSR).

(4) UK - 2020 estimate is based on GB provisional total for the year ending June 2020 (1580 deaths) and the provisional data for Northern Ireland for the calendar year 2020 (56 deaths).

Table 2 (Fig.8,10) Road deaths between 2001 and 2020.

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Fig.8 2001- 2020	Fig.10 Annual average change in the number of road deaths 2010-2020 ⁽⁵⁾					
AT	958	956	931	878	768	730	691	679	633	552	523	531	455	430	479	432	414	409	416	344	ES*	-75.2%	NO	-6.9%			
BE*	1,486	1,355	n/a	n/a	1,089	1,073	1,071	944	943	850	884	827	764	745	762	670	609	604	646	484	LT*	-75.2%	EL*	-6.4%			
BG	1,011	959	960	943	957	1,043	1,006	1,061	901	776	658	605	601	655	708	708	682	611	628	463	LV	-75.1%	EE	-5.6%	2012- 2020		
CY	98	94	97	117	102	86	89	82	71	60	71	51	44	45	57	46	53	49	52	48	SI	-71.2%	CH	-4.9%			
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	658	617	517	PT*	-70.4%	PT*	-4.5%			
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	3,275	3,059	2,724	EE	-69.8%	SI	-4.7%			
DK*	431	463	432	369	331	306	406	406	303	255	220	167	191	183	178	211	183	175	199	155	FR	-69.2%	HR	-4.6%			
EE	199	223	164	170	169	204	196	132	100	79	101	87	81	78	67	71	48	67	52	60	EL*	-69.2%	LV	-4.3%			
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	1,755	1,366	BE*	-67.4%	PL	-4.2%			
FI*	433	415	379	375	379	336	380	344	279	272	292	255	258	229	270	258	238	239	211	221	IT*	-66.3%	BE*	-4.2%	2010- 2019		
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	3,244	2,541	NO	-66.2%	AT	-3.7%	2012- 2020		
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	700	688	579	AT	-64.1%	SK	-3.5%			
HR	647	627	701	608	597	614	619	664	548	426	418	393	368	308	348	307	331	317	297	237	DK*	-64.0%	CZ	-3.4%			
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	633	602	464	IE*	-63.7%	LU	-3.4%			
IE†	411	376	335	374	396	365	338	279	238	212	186	163	188	192	162	182	155	137	140	149	SK	-63.5%	ES*	-3.2%			
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	3,334	3,173	2,390	HR	-63.4%	RS	-3.1%			
LU	70	62	53	50	47	43	45	35	48	32	33	34	45	35	36	32	25	36	22	26	LU	-62.9%	DE*	-2.7%			
LV	558	559	532	516	442	407	419	316	254	218	179	177	179	212	188	158	136	148	132	139	HU	-62.6%	SE	-2.2%			
LT	706	697	709	752	773	760	740	499	370	299	297	302	258	267	242	192	192	173	186	175	SE	-61.8%	BG	-2.2%			
MT	16	16	16	13	16	10	14	15	21	15	17	9	18	10	11	22	19	18	16	12	RS	-61.4%	FR	-2.1%	2010- 2017		
NL ⁽²⁾	1,083	1,069	1,088	881	817	811	791	750	720	640	661	650	570	570	620	629	613	678	661	610	CZ	-61.2%	HU	-2.1%			
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	2,831	2,862	2,909	2,491	DE*	-61.0%	RO	-2.0%			
PT*(3)	1,670	1,668	1,542	1,294	1,247	969	974	885	840	937	891	718	637	638	593	563	602	675	626	495	CH	-58.3%	CY	-1.9%			
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	1,864	1,646	PL	-55.0%	DK*	-1.9%	2010- 2019		
SE	534	515	512	463	423	428	454	380	341	266	319	285	260	270	259	270	253	324	221	204	UK ⁽⁴⁾	-54.5%	GB	-0.4%			
SI	278	269	242	274	257	262	293	214	171	138	141	130	125	108	120	130	104	91	102	80	BG	-54.2%	IL	0.1%	2013- 2020		
SK	614	610	645	603	560	579	627	558	347	345	324	296	223	259	274	242	250	229	245	224	CY	-51.0%	NL	0.3%	2010- 2019		
UK ⁽⁴⁾	3,598	3,581	3,658	3,368	3,337	3,300	3,056	2,718	2,337	1,905	1,960	1,802	1,770	1,854	1,804	1,860	1,856	1,839	1,808	1,636	FI*	-49.0%	MT	1.5%			
CH	544	513	546	510	409	370	384	357	349	327	320	339	269	243	253	216	230	233	187	227	IL	-46.0%	EU23	-4.0%			
IL	565	548	480	505	465	439	415	433	346	375	382	290	309	319	356	377	364	316	355	305	NL	-43.7%	FI	Excluded from Fig.11			
NO	275	310	280	257	224	242	233	255	212	208	168	145	187	147	117	135	106	108	108	93	RO	-32.8%	IE	Excluded from Fig.11			
RS	1,275	854	868	960	843	911	968	905	809	660	731	688	650	536	599	607	579	548	534	492	MT	-25.0%	IT	Excluded from Fig.11			
LT																									LT	Excluded from Fig.11	
EU27	51,483	50,577	46,286	43,482	42,604	40,452	40,125	36,947	33,052	29,691	28,866	26,538	24,296	24,184	24,416	23,880	23,455	23,363	22,763	18,844	EU27	-63.5%					

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

*National provisional estimates used for 2020, as the final figures for 2020 were not yet available this report went to print.

†IE - provisional data 2018-2020.

(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. 2020 road death data provided by the National Road Safety Authority (ANSR).

(4) UK - 2020 estimate is based on GB provisional total for the year ending June 2020 (1580 deaths) and the provisional data for Northern Ireland for the calendar year 2020 (56 deaths).

(5) The average annual change is based on the entire time series of all the ten annual numbers of road deaths between 2010 and 2020, and estimates the average exponential trend. For more information, read the methodological note, PIN Flash 6: [https:// bit.ly/2LVVUtY](https://bit.ly/2LVVUtY)

Table 3 (Fig.4) Road deaths per million inhabitants in 2020 and 2010.

	2020				2010		
	Road deaths	Inhabitants	Deaths per mln inhabitants		Road deaths	Inhabitants	Deaths per mln inhabitants
NO	93	5,367,580	17.3	NO	208	4,858,199	42.8
SE	204	10,327,589	19.8	SE	266	9,340,682	28.5
MT	12	514,564	23.3	MT	15	414,027	36.2
UK ⁽³⁾	1,636	67,025,542	24.4	UK ⁽³⁾	1,905	62,510,197	30.5
CH	227	8,606,033	26.4	CH	327	7,785,806	42.0
DK*	155	5,822,763	26.6	DK	255	5,534,738	46.1
ES	1,366	47,332,614	28.9	ES*	2,478	46,486,619	53.3
IE*	149	4,964,440	30.0	IE*	212	4,549,428	46.6
DE*	2,724	83,166,711	32.8	DE*	3,651	81,802,257	44.6
IL	305	9,293,900	32.8	IL	375	7,695,100	48.7
NL	610	17,407,585	35.0	NL	640	16,574,989	38.6
SI	80	2,095,861	38.2	SI	138	2,046,976	67.4
AT	344	8,901,064	38.6	AT	552	8,375,290	65.9
FR ⁽¹⁾	2,541	65,123,843	39.0	FR ⁽¹⁾	3,992	62,765,235	63.6
FI*	221	5,525,292	40.0	FI*	272	5,351,427	50.8
IT*	2,390	59,641,488	40.1	IT*	4,114	59,190,143	69.5
SK	224	5,457,873	41.0	SK*	345	5,390,410	64.0
LU	26	626,108	41.5	LU	32	502,066	63.7
BE*	484	11,522,440	42.0	BE*	850	10,839,905	78.4
EE	60	1,328,976	45.1	EE*	79	1,333,290	59.3
HU	464	9,769,526	47.5	HU	740	10,014,324	73.9
CZ	517	10,693,939	48.3	CZ	802	10,462,088	76.7
PT ⁽²⁾	495	9,802,128	50.5	PT ⁽²⁾	937	10,573,479	88.6
EL*	579	10,718,565	54.0	EL*	1,258	11,183,516	112.5
CY	48	888,005	54.1	CY	60	819,140	73.2
HR	237	4,058,165	58.4	HR	426	4,302,847	99.0
LT	175	2,794,090	62.6	LT	299	3,141,976	95.2
PL	2,491	37,958,138	65.6	PL	3,907	38,167,329	102.4
BG	463	6,951,482	66.6	BG	776	7,421,766	104.6
RS	492	6,926,705	71.0	RS*	660	7,306,677	90.3
LV	139	1,907,675	72.9	LV	218	2,120,504	102.8
RO	1,646	19,328,838	85.2	RO	2,377	20,294,683	117.1
EU 27	18,844	444,660,806	42.3	EU 27	29,691	438,999,134	67.6

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

*National provisional estimates used for 2020, as the final figures for 2020 were not yet available this report went to print.

⁽¹⁾ FR - continental population data.

⁽²⁾ PT - continental population estimate. 2020 road death and continental population data provided by the National Road Safety Authority (ANSR).

⁽³⁾ UK - 2020 estimate is based on GB provisional total for the year ending June 2020 (1580 deaths) and the provisional data for Northern Ireland for the calendar year 2020 (56 deaths).

Table 4 (Fig.5) Road deaths per billion vehicle-kilometres over three recent years.

	Road deaths three year average	Average distance travelled (in millions) ⁽¹⁾	3yr average deaths per distance	Time period covered
NO	103	45,062	2.29	2018-2020
IE	144	47,790	3.01	2017-2019
SE	250	81,982	3.05	2018-2020
GB ⁽²⁾	1,776	563,928	3.15	2017-2019
CH	216	66,945	3.22	2018-2020
DK	176	50,872	3.47	2018-2020
DE	3,019	726,367	4.16	2018-2020
FI	224	49,789	4.49	2018-2020
SI	98	21,616	4.51	2017-2018
NL ⁽²⁾	651	135,175	4.81	2017-2019
AT	390	83,394	4.95	2017-2019
EE	60	11,369	5.25	2018-2020
FR	3,313	621,817	5.33	2017-2019
IL	325	61,330	5.63	2017-2019
IT	2,966	503,363	5.89	2018-2020
MT	15	2,266	6.77	2018-2020
PT	599	69,426	8.62	2018-2020
CZ ⁽³⁾	520	55,405	9.38	2018-2020
LV	140	14,232	9.81	2018-2020
HR	284	26,194	10.83	2018-2020
PL	2,847	241,464	11.79	2017-2018
EU17	16,412	2,724,660	6.02	
BE	609	103,175	5.90	2017
ES			230,577	
HU			44,619	
LT			12,644	2018-2020
SK			56,872	
BG			n/a	
CY			n/a	
EL			n/a	
LU			n/a	
RO			n/a	
RS			n/a	

EU17 average: EU27 excluding BG, CY, EL, LU and RO due to lack of data on vehicle distance travelled, ES, HU and LT are excluded as data on km driven is available on part of the road network.

⁽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.

⁽³⁾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 where 87% of all road deaths occur, 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 2010-2019 and annual average relative change over the period 2010-2019

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
AT ^{(2)*}	6,370	6,397	8,017	7,344	7,434	7,486	7,566	7,664	7,631	7,384	6,650
AT MAIS3+	1,508	1,512	1,546	1,397	1,402	1,303	1,380	1,238	1,279	1,211	
BE*	5,606	5,739	4,736	4,581	4,484	4,181	4,095	3,762	3,637	3,600	
BE MAIS3+					3,979						
BG	8,078	8,301	8,193	8,776	8,639	8,971	9,374	8,680	8,466	8,499	7,121
BG MAIS3+	2,451	2,366	2,204	2,034	2,175	2,295	2,503	1,943	1,988	1,937	1,556
CY*	586	561	551	407	467	377	406	388	348	340	211
CY MAIS3+					83			92	85		
CZ	2,788	3,045	2,934	2,721	2,714	2,487	2,530	2,286	2,395	2,061	1,761
CZ MAIS3+											
DE*	62,620	68,985	66,279	64,045	67,709	67,706	67,426	66,513	67,967	65,244	57,983
DE MAIS3+					14,645						
DK	2,063	2,172	1,952	1,891	1,798	1,780	1,797	1,756	1,862	1,822	
DK MAIS3+											
EE*			476	501	455	407	424	429	420	356	346
EE MAIS3+											
ES	11,995	11,347	10,444	10,086	9,574	9,495	9,755	9,546	8,935	8,613	6,642
ES MAIS3+	7,331	7,420	7,047	6,613	6,343	6,955					
FI ⁽³⁾	1,326	1,308			519	477	460	409	485	390	
FI MAIS3+					519	477	460	409	485	390	
FR*	30,393	29,679	27,142	25,966	26,635	26,595	27,187	27,732			
FR MAIS3+	27,228	26,754	24,542	23,291	24,592	24,273	25,401				
EL*	1,709	1,626	1,399	1,212	1,016	999	879	706	727	652	487
EL MAIS3+											
HR	3,182	3,409	3,049	2,831	2,675	2,822	2,746	2,776	2,731	2,492	2,302
HR MAIS3+											
HU	5,671	5,152	4,921	5,369	5,331	5,575	5,539	5,627	5,559	5,482	4,657
HU MAIS3+											
IE ^{(4)*}	561	472	474	508	759	827	965	1,052	1,359	1,360	
IE MAIS3+					343						
IT							17,324	17,309	18,614	17,600	
IT MAIS 3+			13,112	12,899	14,943	15,901	17,324	17,309	18,614		
LU*	266	317	339	316	245	319	249	256	273	248	217
LU MAIS3+						69	69	43	55*		
LV*	569	531	493	452	434	479	525	496	542	461	491
LV MAIS3+											
LT											
LT MAIS3+											
MT	211	235	300	265	292	306	294	304	317	305	242
MT MAIS3+											
NL	19,100	19,700	19,500	18,800	20,700	21,300	21,400	20,800	21,700	21,400	
NL MAIS3+	5,700	6,100	6,400	6,500	5,800	6,000	6,400	6,500	6,800	6,900	
PL	11,491	12,585	12,049	11,672	11,696	11,200	12,077	11,103	10,941	10,633	8,805
PL MAIS3+				1,859	2,263						
PT*	2,475	2,265	1,941	1,946	2,010	2,148	1,999	2,117	1,995	2,168	1,762
PT MAIS3+	2,290	2,368	2,111	2,074	2,055	2,171	2,198	2,296	2,264	2,089	
RO	8,509	8,768	8,860	8,156	8,122	9,057	8,285	8,181	8,144	8,125	5,484
RO MAIS3+											
SE	4,662	4,518	4,450	4,826	4,889	4,313	4,472	4,371	4,160	3,850	3,600
SE MAIS3+	1,217	1,102	1,032	1,091	1,159	906	962	903	921	790	833
SI	880	919	848	708	826	926	850	851	821	814	687
SI MAIS 3+					213						
SK	1,207	1,168	1,122	1,086	1,098	1,121	1,057	1,127	1,272	1,050	914
SK MAIS3+											
UK*											
UK MAIS3+	4,683	4,949	5,160	5,236	5,741	6,092	6,547				
GB	35,097	35,612	35,134	33,153	34,915	33,463	32,110	30,800	31,186	30,144	
GB MAIS3+	4,586	4,871	5,062	5,174	5,667	6,012	6,479				
CH*	4,458	4,437	4,202	4,129	4,043	3,830	3,785	3,654	3,873	3,639	3,793
CH MAIS3+		3,428	3,262	3,204	2,899	2,887	2,929	3,127	3,732		
IL ^{(5)*}	1,683	1,340	1,611								
IL MAIS3+				2,078	2,006	2,174	2,400	2,326	2,166	2,394	2,025
NO	714	679	699	703	674	693	656	665	602	565	627
NO MAIS3+											
RS	3,883	3,777	3,544	3,422	3,275	3,448	3,362	3,514	3,338	3,322	2,953
RS MAIS3+											
EU23 ⁽⁶⁾	190,921	197,909	189,995	183,957	189,243	190,050	190,932	187,471	188,013	182,769	164,437

* Similar national serious injury definition. EU23: EU27 excluding FI, IE, IT and LT due to insufficient data. EU23 average is an ETSC estimate as whole time series for serious injury data are not available in all 23 EU countries that collect data.

⁽¹⁾EU23 average for 2020 is an ETSC estimate as serious injury data in 2020 were not available in some countries.

⁽²⁾AT - serious injury data collection methodology changed in 2012.

⁽³⁾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.

⁽⁴⁾IE - serious injury data collection methodology changed in 2014.

⁽⁵⁾IL - serious injury data collection methodology changed in 2013.

⁽⁶⁾The average annual change is based on the entire time series of all the ten annual numbers of road deaths between 2010 and 2020, and estimates the average exponential trend. For more information, read the methodology note, PIN Flash 6: [https:// bit.ly/2LVVUUY](https://bit.ly/2LVVUUY)

	Fig.9 2010- 2020	Time period
EL	-71.5%	
CY	-64.0%	
ES	-44.6%	
CZ	-36.8%	
BE	-35.8%	2010-2019
RO	-35.6%	
PT	-28.8%	
HR	-27.7%	
EE	-27.3%	2012-2020
FI	-24.9%	2014-2019
SK	-24.3%	
RS	-24.0%	
PL	-23.4%	
SE	-22.8%	
SI	-21.9%	
LU	-18.4%	
HU	-17.9%	
AT	-17.1%	2012-2020
CH	-14.9%	
GB	-14.1%	2010-2019
LV	-13.7%	
NO	-12.2%	
BG	-11.8%	
DK	-11.7%	2010-2019
FR	-8.8%	2010-2017
DE	-7.4%	
IL	-2.6%	2013-2020
NL	12.0%	
MT	14.7%	
EU 23	-13.9%	

	Fig.11 Annual average change in the number serious injuries 2010-2020 ⁽⁶⁾	
EL	-11.2%	
CY	-7.6%	
BE	-5.2%	2010-2019
CZ	-4.3%	
ES	-4.1%	
EE	-3.9%	2012-2020
HR	-2.9%	
LU	-2.7%	
RO	-2.4%	
SE	-2.2%	
PL	-2.1%	
CH	-1.9%	
GB	-1.9%	2010-2019
RS	-1.8%	
NO	-1.8%	
DK	-1.7%	2010-2019
PT	-1.5%	
FR	-1.3%	2010-2017
SI	-1.3%	
SK	-1.3%	
AT	-1.1%	2012-2020
LV	-0.6%	
DE	-0.4%	
BG	-0.3%	
HU	-0.2%	
IL	0.8%	2013-2020
NL	1.5%	2010-2019
MT	2.0%	
EU23	-1.3%	
FI	n/a	
IE	n/a	
IT	n/a	
LT	n/a	

	Fig.10*			
	Serious injuries (national def) per death	Time period for national def	MAIS3+ per death	Time period for MAIS3+
AT	18.5		3.0	2017-2019
BE	5.9	2017-2019		
BG	14.2		3.2	
CY	6.0		1.7	2017-2018
CZ	3.5			
DE	21.1			
DK	9.8	2017-2019		
EE	6.3			
ES	4.9			
FI			1.9	2017-2019
FR	7.8	2015-2017	7.2	2015-2016
EL	0.9			
GB	16.7			2015-2016
HR	8.8			
HU	9.2			
IE	8.7	2017-2019		
IT			5.3	2017-2019
LU	8.8		1.9	2015-2017
LV	3.6			
MT	18.8			
NL	32.7	2017-2019	10.3	2017-2019
PL	3.7			
PT	3.4		3.5	2017-2019
RO	4.0			
SE	15.5		3.4	2018-2020
SI	8.5			
SK	4.6			
CH	17.5		14.4	2016-2018
IL			6.7	2018-2020
NO	5.8			
RS	6.1			
LT	Excluded from Fig.10			

*Numbers between countries are not comparable.

Table 6. Current national definitions of a seriously injured person in a road collision.

National definition of a seriously injured person (before introducing MAIS 3+ definition) in a road collision corresponding to the data in Table 3	
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. For 2017 and 2018, serious injuries based on MAIS3+ were also estimated, by the Ministry of Health. For 2019 and 2020, it is unpredictable when the numbers will be calculated, because of the COVID19 crisis.
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 injuries include injuries, fractures, bruises, internal injuries, severe cuts and destruction, general shock requiring medical treatment, or any injury requiring hospital care, which usually heals beyond 8 days.
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, severe general shock requiring medical treatment.
IT	Separate statistics on seriously and slightly injuries are n/a in the road accidents dataset. Despite that, Italy calculated the number of serious 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	A serious road injury is a road crash casualty who has been admitted to hospital with a minimum MAIS (Maximum Abbreviated Injury Score)5) 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+. The MAIS2+ series is just appended with the new 2018 and 2019 figures in the new methodology, as EVG numbers have been 'officially' set and are only replaced on special occasions. The new method has an improved matching window for data/time of crash and data/time of hospitalisation, and is now expressed in AIS2005/08 (instead of AIS1990). The total estimate is hardly different, the number of MAIS3+ is lower in the new method. https://www.swov.nl/en/facts-figures/factsheet/serious-road-injuries-netherlands
PL	Seriously injured – a person who has suffered injuries, in the form of: a) blindness, loss of hearing, loss of speech, ability to procreate, other severe disability, severe incurable disease or long-term life-threatening illness, permanent mental illness, complete substantial permanent inability to work in the occupation or permanent, significant body disfigurement b) other injuries causing disturbance of the functioning of a bodily organ or health disorder lasting longer than 7 days. Police records.
PT*	Hospitalised for at least 24 hours. Police records.

RO	From 2021 we use MAIS3+ with conversion approved by DG-MOVE because RO Hospitals used ICD 10 Australian version.
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 the 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	"1965-2012: A person injured in a road crash and hospitalized for a period of 24 hours or more, not for observation only. 2013 onwards: Police data is linked with the hospital data and any casualty found in both sources had their severity of injury defined by MAIS. If the casualty was not found in the hospital data, their severity of injury was defined by the police. Seriously injured is defined by MAIS 3+ or hospitalized for a period of 24 hours or more, not for observation only."
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. Categorisation of an injury as a "serious injury" is made on the basis of expert assessment given by doctors during admission to hospital, during hospitalisation or after the hospitalisation. 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 on MAIS3+.

AT	<p>"The KfV carried out a feasibility study on MAIS3+ assessment on behalf of the (then) 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.</p> <p>The latter method was selected for further use. In late 2015, the number of MAIS3+ injuries was estimated for the first time for the year 2014 (using the AAAM conversion table) and has been continued for all years thereafter. Time series available starting 2010."</p>
BE	<p>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.</p>
BG	<p>The only source is Police records.</p>
CY	<p>We have supplied to the Commission the data based on MAIS3+ for 2017 and 2018. For 2019 and 2020, it is unpredictable when the number will be calculated, because of the COVID19 crisis.</p>
CZ	<p>Negotiations between the Ministry of Interior and the Ministry of Health under way, implementation of MAIS3+ maybe in 2022.</p>
DE	<p>A 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.</p>
DK	<p>No systematic linkage between police and hospital data. Denmark is working on a process to convert ICD diagnose codes into AIS and MAIS.</p>
EE	<p>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 depends on the initial data quality and convention tool (AAAM) updates. Legislative changes are being discussed by different stakeholders.</p>
ES	<p>Data available from 2010. Since 2011 MAIS3+ is published in official reports. In a near future Spain will add MAIS3+ to the current definition of seriously injured.</p>
FI	<p>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.</p>
FR	<p>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.</p>
EL	<p>Hospitals do not systematically collect data on the injury severity of road casualties.</p>
HR	<p>Link between police and hospital is based on the law. Only ICD based number is available.</p>
HU	<p>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.</p>
IE	<p>An estimate of the number of seriously injured was calculated using the conversion tables made available by the EC but concerns about the results achieved have resulted in a delay to further work. The next Road Safety Strategy 2021 - 2030 is being developed and the continued work to report serious injuries using a medical definition will be a priority within this framework.</p>
IT	<p>The current data architecture does not provide direct linkage between police and hospital data. MAIS3+ has been 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 since year 2012 according to the conversion tables made available by EC.</p>
LU	<p>MAIS3+ will be used in the near future.</p>
LV	<p>Technologically Latvia is ready to link accident data with health data, but we need to change legislation (planning in 2021). Is planning to start registered from 1st January, 2022.</p>
LT	<p>MAIS3+ data already available since 2014.</p>
MT	<p>MAIS3+ conversion process from ICD to MAIS3+ is still ongoing. Progress stalled due to a low rate of positive matches in converting data using conversion tables provided by the EC. Process to be resumed once provided with the new conversion table developed by AAAM and provided by EC.</p>

NL	Data on MAIS3+ already available 1993-2018; at the moment, no further disaggregates of this data are available
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. A protocol for agreed procedure implementation is being prepared for signature by relevant parties."
RO	From 2021 we use MAIS3+ with conversion approved by DG-MOVE because RO Hospitals used ICD 10 Australian version.
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	Under discussion.
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	Since 2013 police data is linked with hospital data. Any casualty found in both sources, their injury severity is defined by MAIS. If the casualty was not found in the hospital data, their injury severity is defined by the police. Seriously injured is defined by MAIS 3+ or hospitalised for a period of 24 hours or more, not for observation only.
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 introduction MAIS3+ definition of serious injuries in road traffic accidents in the next period.

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