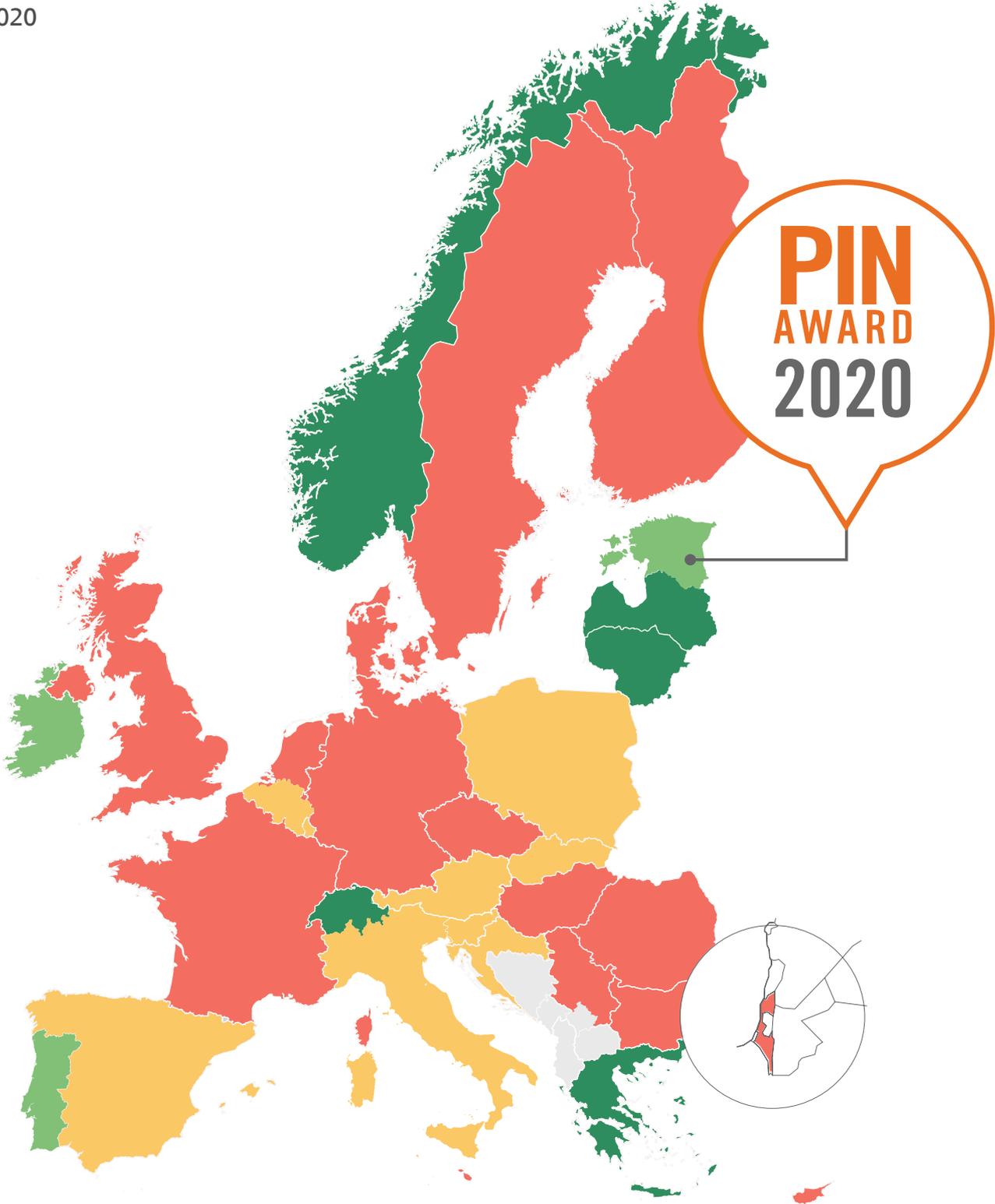


RANKING EU PROGRESS ON ROAD SAFETY

14th Road Safety Performance Index Report

June 2020



European Transport Safety Council

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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, EU Member States and other 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



There is now just one year remaining until we know definitively whether EU Member States have collectively delivered on their target to cut road deaths by 50% by the end of 2020. In this annual PIN report, we have analysed the data for 2019, the latest update in a process we have undertaken every year since the target was agreed.

It is now almost certain that the target will not be reached on time.

There is no single, simple explanation for why progress has stagnated. There is little doubt that the effects of the 2008 financial crisis and recovery have played a role. Cuts in enforcement budgets and infrastructure spending together with an ageing vehicle fleet have not helped. At national level, in several countries, a lack of political will to develop and deliver comprehensive road safety strategies is part of the problem. In general, progress on creating appropriate infrastructure for safe cycling and walking has been slow and sporadic, despite increased awareness and demand. Inappropriate speed remains a problem on every type of road. Drink, drug and distracted driving remain difficult problems that need greater attention everywhere.

Over the five-year mandate of the last European Commission and Parliament, the most important legislative initiatives on vehicle and infrastructure safety came late in the day and will only start to have an effect over the decade to come. We hope new planned initiatives, such as updates to driving license regulations and cross-border enforcement will not see similar delays.

In any case, stagnation at the pan-European level does not tell the whole story and progress at national level does not always fit the usual narratives. Rich countries have made dramatic gains: Norway and Switzerland being two examples. But rich countries are also going in to reverse: the Netherlands and the UK had more deaths in 2019 than in 2010. Germany, Denmark and, notably, Sweden (traditionally a leader on road safety) are near the bottom of the pack in terms of improvement since 2010. Yet, Portugal and Greece are in the top 5. The Baltic countries (Estonia, Latvia and Lithuania) are also leaders, with Estonia taking this year's ETSC PIN Award for its outstanding efforts.

At the time of writing, much of Europe was in varying degrees of lockdown caused by the Covid-19 pandemic. It's a once-in-a-lifetime crisis that presents great threats, but also great opportunities.

On the one hand, there have been many reports of excessive speed as an irresponsible few take advantage of empty roads and police that may be preoccupied checking on social distancing with less time for traffic safety. This is clearly a challenge that must be dealt with to avoid a new normal of speeding with impunity.

On the other hand, we have seen incredible examples of cities and towns across the continent responding to the new demand for safe cycling and walking. New separated cycle lanes have popped up, literally overnight. Pavement widening, closure of streets to cars, cycle-priority streets – all have sprung up at unprecedented speed and scale. At ETSC, we have been making the case for many years that cities need to be redesigned to promote the safest and most sustainable forms of transport – keeping vulnerable road users separate from cars, vans and lorries. The transition out of lockdown could lead to a transport safety revolution, or a return to business as usual. It will be up to all of us to help forge a path to a new normal not a return to streets where our children are not safe to walk.

It will be up to all of us to help forge a path to a new normal, not a return to streets where our children are not safe to walk

EXECUTIVE SUMMARY

22,660 people lost their lives on EU roads in 2019, representing a 3% reduction compared to 2018. Out of the 32 countries monitored by the ETSC Road Safety Performance Index (PIN) programme, 16 reduced road deaths in 2019 (Fig. 1). The best results were achieved by Luxembourg with a 39% decrease, Sweden with 32%, Estonia with 22% and Switzerland with 20%. Road deaths increased in 12 countries, while progress stagnated in four.

While there has been progress over a longer period, it is not enough to meet the 2020 target. Since 2010, EU countries achieved an overall reduction in road deaths of 24%, which equates to a 2.7% annual average reduction. A 6.7% year-to-year reduction was needed over the 2010-2020 period to reach the 2020 target through constant progress in annual percentage terms. This reduction was not achieved and, with the target now only one year away, it is out of reach. In order to reach the target, the EU27 would need to reduce the number of road deaths by 34.5% between 2019 and 2020. While it is expected that the lockdowns imposed across Europe due to the Covid-19 virus may bring a drop in the number of road deaths in 2020, it seems unlikely that the numbers will fall far enough. Furthermore, even if they did, it could not be considered an achievement but merely the consequence of a disruptive external event, without any guarantee of continuing.

18 PIN countries have prepared or started to prepare national road safety strategies for the upcoming decade. Country efforts will be critical for the implementation of the Safe System approach across the EU and for achieving the 2030 targets. A number of countries are already collecting or planning to start collecting data for the new EU Key Performance Indicators (KPIs) announced by the European Commission in agreement with the Member States. But they must work quickly to finalise defining some of these KPIs, as well as setting minimum requirements on data collection methodologies and introducing outcome targets.

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

CURRENT EU POLICY DEVELOPMENTS

Six years of extremely slow progress in road death reductions since 2013 highlight the urgent need for strong action at EU level. In May 2018, the European Commission adopted its EU Strategic Action Plan for Road Safety 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. It was followed up in June 2019 with the publication of the EU Road Safety Policy Framework 2021-2030, which introduced a number of Key Performance Indicators with which the EU will measure the overall safety performance of EU Member States. The new European Commissioner for Transport, Adina Vălean, reaffirmed her commitment to the new 2030 target and the Safe System approach in her first address to the European Parliament as Commissioner.¹

The EU Strategic Action Plan on road safety² was published as part of the third mobility package, which also included new vehicle safety standards, updated rules on road infrastructure safety management and a strategy for automated driving.

¹ ETSC (2020), MEPs demand action on road safety at first plenary debate with new Transport Commissioner, <https://bit.ly/2U5lo8l>

² ETSC (2019), Briefing: EU Strategic Action Plan on Road Safety, <https://bit.ly/2TQZEP4>

The new “General Safety Regulation” comprises a number of updated minimum safety requirements for new vehicles, most of them will come into force starting in 2022.³ 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.

TRL, the UK Transport Research Laboratory, estimated in a study for the European Commission that the package of proposed vehicle safety measures could prevent around 25,000 deaths and 140,000 people seriously injured across all vehicle categories within 15 years.⁴

As of 2021, the new minimum Infrastructure Safety Management procedures as set by the revised Directive 2019/1936⁵ 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.⁶ The proposed measures were estimated to save up to 3200 lives and prevent more than 20,000 serious injuries over the period 2020-2030. The main changes under the revised legislation include extending the scope beyond the trans-European transport network roads (TEN-T) to primary roads, 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.

Among the upcoming important EU initiatives are the revisions of the driving license and cross-border enforcement directives as well as a recommendation for a Sustainable and Smart mobility strategy.

The period of currency of the EU white paper “Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system”⁷ is due to end in 2020. It is of utmost importance to ensure that road safety remains a priority in the upcoming decade within the new transport white paper.

The European strategy is also part of a more extensive global strategy to combat road collisions as discussed during the Third Global Ministerial Conference on Road Safety in February 2020 and stated in the Stockholm Declaration⁸. The Stockholm Declaration connects road safety to the implementation of the 2030 Agenda for Sustainable Development.

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 Member State.

The 27 EU Member States, together with the UK, agreed to, and are working 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.

For the first time in the PIN annual report, data for the United Kingdom are excluded from aggregate EU data 2010-2019 used in this report, following the UK’s exit from the European Union on 31 January 2020.

³ 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>

⁴ TRL, Cost-effectiveness analysis of policy options for the mandatory implementation of different sets of vehicle safety measures, Review of the General Safety and Pedestrian Safety Regulations, <https://bit.ly/2IN9ltI>

⁵ 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>

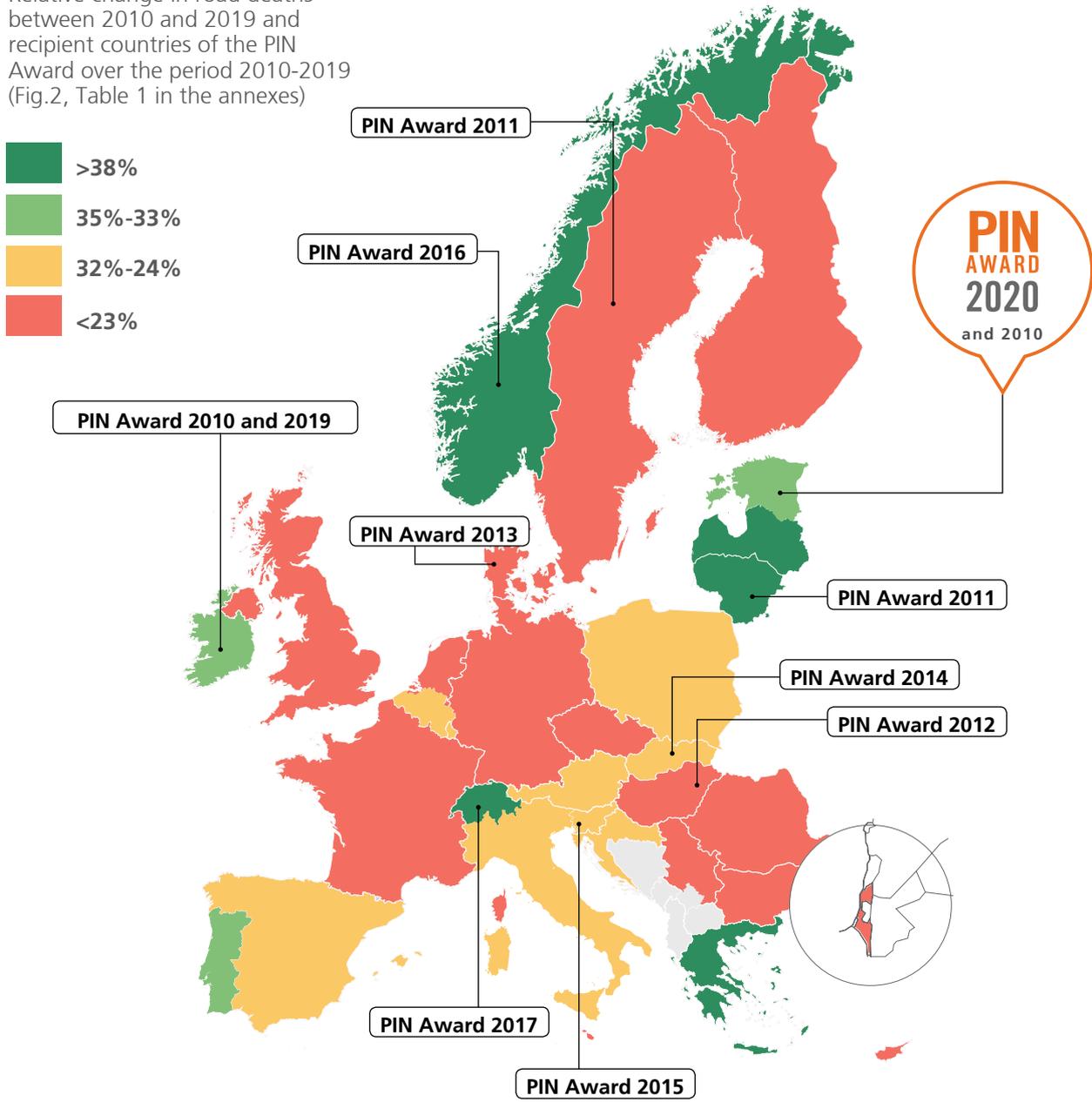
⁶ ETSC (2019), European Transport Safety Council welcomes deal on safer EU road rules, <https://bit.ly/302foTa>

⁷ WHITE PAPER Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system, <https://bit.ly/3cdfcms>

⁸ Stockholm Declaration (February 2020) Third Global Ministerial Conference on Road Safety: Achieving Global Goals 2030 <https://bit.ly/2U9fIM1>

MAP 1:

Relative change in road deaths between 2010 and 2019 and recipient countries of the PIN Award over the period 2010-2019 (Fig.2, Table 1 in the annexes)



MAIN RECOMMENDATIONS TO THE NATIONAL LEVEL

- Seek to accelerate the progress by all available means, including applying proven traffic law enforcement strategies according to the EC Recommendation on Enforcement.⁹
- 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.¹⁰
- 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.
- Adopt post-2020 road safety plans, including national targets for reducing serious injuries based on the MAIS3+ standard alongside the reduction of road deaths and quantitative sub-targets based on performance indicators.
- Use the evidence gathered to devise and update relevant policies. Make the choice of measures based on sound evaluation studies and - where applicable - cost effectiveness considerations including serious injuries in the impact assessment of countermeasures.
- Conduct a thorough qualitative assessment of current road safety strategies to evaluate the levels of implementation and effectiveness of the foreseen road safety measures in reaching road safety targets.
- Collect, and report to the European Commission, data to deliver the Key Performance Indicators included in the EU Road Safety Policy Framework 2021-2030.
- Designate the maximum number of primary roads to increase the road safety potential of the new Road Infrastructure Safety Management Directive.

MAIN RECOMMENDATIONS TO THE EUROPEAN COMMISSION

- Recommit to the ambitious new road safety targets in the upcoming Sustainable and Smart Mobility Strategy.
- Call upon 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 SDG targets, including 3.6 after 2020.

Within the framework of the EU strategic action plan on road safety:¹¹

- Develop clearer priority measures for action, as well as a detailed road map against which performance is measured and delivery made accountable to 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 revise legislation in the medium term (e.g in 2025);
- Finalise and start collecting with Member States a list of key performance indicators to monitor progress;
- Adopt a long-term operational plan for 2030, including investments in measures and a timetable and structure for delivering the two targets already endorsed;
- Set the strategy within the context of changing mobility patterns including new trends such as automation, increased walking and cycling due to promotion of active travel and an ageing population;
- Extend the application of the instruments of the Road Infrastructure Safety Management Directive to cover all EU co-financed roads, all primary roads including all main rural and main urban roads;
- Deliver on the estimated number of deaths and seriously injured 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 test equivalent to a 'driving test'. This should take into account high-risk scenarios for occupants and road users outside the vehicle.¹⁴

⁹ EC Recommendation on Enforcement in the Field of Road Safety 2004/345, <http://goo.gl/Vw0zhN>

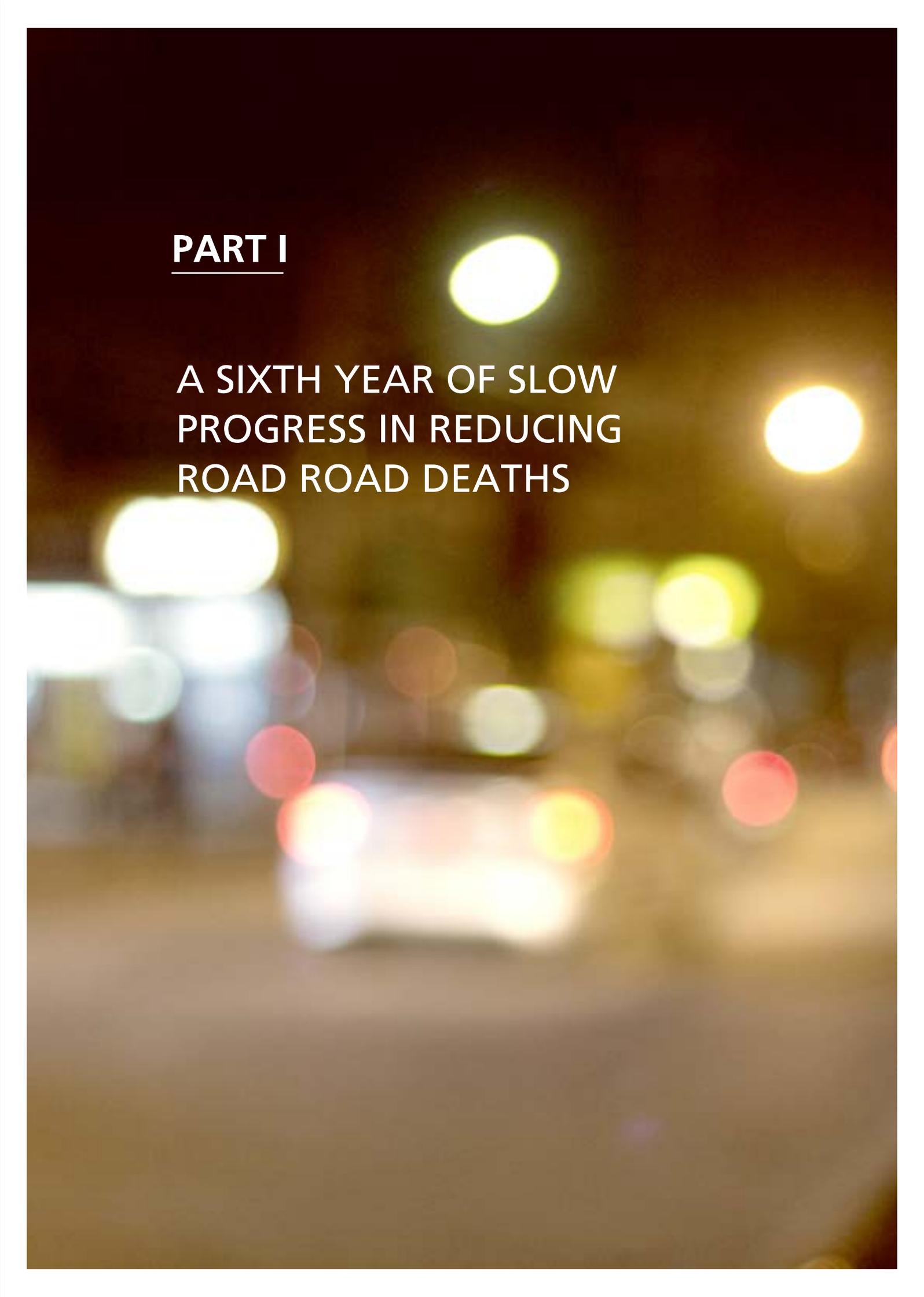
¹⁰ ITF-OECD (2008), Towards Zero, Ambitious Road Safety Targets and Safe System Approach, <https://bit.ly/2Mvk1QL>

¹¹ ETSC (2019), Briefing EU Strategic Action Plan on Road Safety <https://bit.ly/36Ua5Xe>

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>

¹⁴ Ibid



PART I

**A SIXTH YEAR OF SLOW
PROGRESS IN REDUCING
ROAD ROAD DEATHS**

01

1.1 ONLY A 3% DECREASE IN THE NUMBER OF ROAD DEATHS IN THE EU IN 2019

Out of 32 countries monitored by the PIN programme, 16 registered a decrease in road deaths in 2019, compared to 2018 (Fig.1).

Luxembourg leads the ranking with a 39% reduction in the number of road deaths between 2018 and 2019.¹⁵ It is followed by Sweden with a 32% decrease, Estonia with 22% and Switzerland with 20%.

The number of road deaths increased in 12 countries, while progress stagnated in four.

The largest increases were registered in Israel with 17%, Denmark with 14%, Slovenia with 12%, Slovakia with 7% and Lithuania and Cyprus with 6%.

The 2020 ETSC Road Safety PIN Award was presented to Estonia on 17 June 2020. The award recognises Estonia's long term performance in improving road safety. The background to the country's recent progress is detailed in an interview with Taavi Aas, Minister for Economic Affairs and Infrastructure in Part IV.

INDICATOR

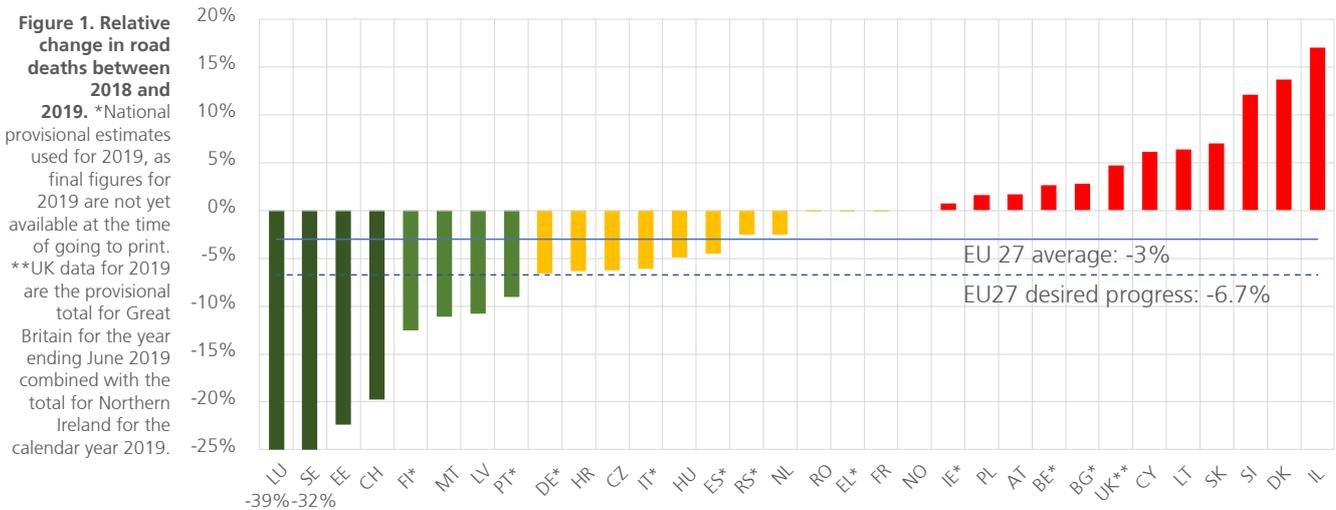
The EU has set a target to halve the number of road deaths by 2020, based on their level in 2010. In this chapter, we track progress against this target using, as main indicators, the relative changes in the numbers of people killed on the road between 2018 and 2019 (Fig.1) and between 2010 and 2019 (Fig.2).

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

The data used are from national statistics supplied by the PIN panellist in each country. The numbers of road deaths in 2019 in Belgium, Bulgaria, Finland, Germany, Greece, Ireland, Italy, Portugal, Spain and Serbia are provisional as final figures were not yet available at the time of going to print. Annual numbers of deaths in Luxembourg and Malta are particularly small and are, therefore, subject to substantial annual fluctuation. Annual numbers of deaths in Cyprus and Estonia are also relatively small and, therefore, may be subject to considerable annual fluctuation. The UK figure for 2019 is the provisional total for Great Britain for the year ending June 2019 together with Northern Ireland's total for the calendar year 2019.

The full dataset is available in the annexes.

Population figures were retrieved from the EUROSTAT database.



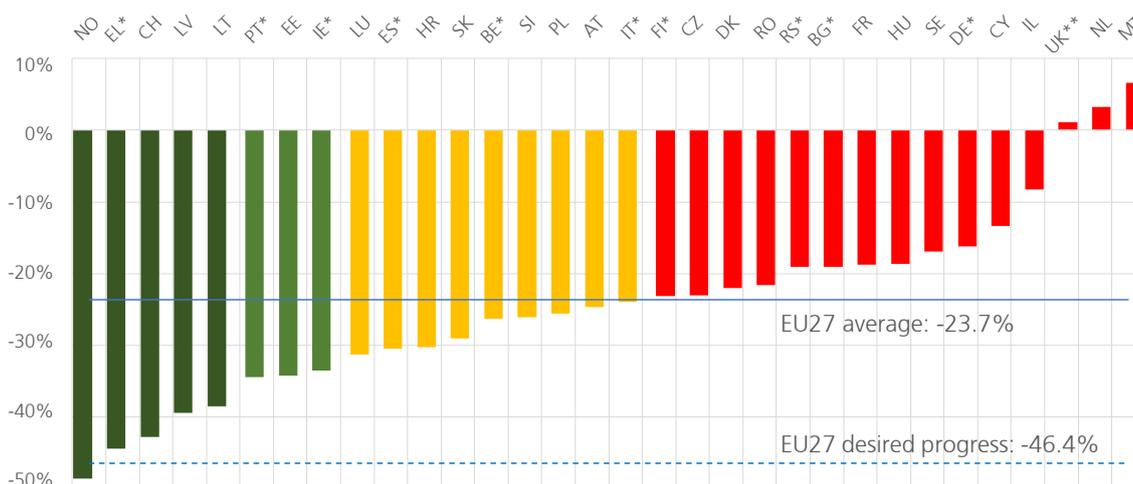
¹⁵ Annual numbers of road deaths in Luxembourg are particularly small and, therefore, subject to substantial annual fluctuations.

1.2 NOT ONE EU MEMBER STATE CURRENTLY ON TRACK TO REACH THE 2020 ROAD DEATH REDUCTION TARGET

The EU 27 collectively has reduced the number of road deaths by 24% over the period 2010-2019, far less than the 46% needed to stay

on course to meet the 2020 target (Fig.2). Not one EU Member State is on track to make the required reductions. Greece comes the closest with a 44% decrease, followed by Latvia with 40% and Lithuania with 39%. Norway, a non-EU country, has reduced the number of road deaths by 49% since 2010.

Figure 2. Relative change in road deaths between 2010 and 2019. *National provisional estimates used for 2019, as final figures for 2019 are not yet available at the time of going to print. **UK data for 2019 are the provisional total for Great Britain for the year ending June 2019 combined with the total for Northern Ireland for the calendar year 2019.



SWITZERLAND EFFORTS TO IMPROVE ROAD SAFETY PAYING OFF

In 2019, Switzerland achieved a 20% reduction in road deaths compared to 2018 levels, going down from 233 people killed in 2018 to 187 in 2019. Since 2010, road deaths have been cut by 43%. 3,639 were seriously injured in 2019, 18% less compared to 2010.

These figures confirm that efforts made in recent years to increase road safety are paying off. Numerous measures focusing on road users, vehicles, data and infrastructure were introduced as part of the Via sicura programme between 2013 and 2016. An evaluation of the effectiveness of the Via sicura road safety programme took place and the report was published in 2017. Although the evaluation of the individual measures was only carried out over a period of (maximum) three years and not all measures had achieved their full effect, overall the programme was deemed a success. According to the report, four measures in

particular contributed to the positive trends in road deaths:

- The ban on alcohol for new and professional drivers;
- The compulsory use of lights during the day for motor vehicles;
- The regulations governing extreme speeding offences with a possibility of a two-year withdrawal of a driving license and one to four years in prison for very high level speeding offences;
- Infrastructure measures including the remediation of high risk sites.

However, over the longer term, some changes might make Swiss road safety targets of less than 100 deaths and 2,500 serious injuries a year by 2030 harder to achieve:

- In 2018, the Swiss parliament gave the mandate to the Federal Council to prepare a draft revision, including the cancellation of plans to introduce an alcohol interlock programme for drink driving offenders, in

line with a governmental recommendation to abandon the scheme following a review of the Via sicura programme the previous year.

- The Swiss Federal Council has decided that from January 2021, the serving and selling of alcohol at motorway service stations will again be authorized.
- Also starting from January 2021, the Swiss Federal Council has decided that on motorways, vehicles in the right-hand lane may pass traffic in the left-hand lane if there is dense traffic in the left-hand lane or, in the case of three-lane motorways, in the middle lane. Until now, it has only been possible for vehicles in the right-hand lane to drive faster than vehicles in the left-hand lane if both lanes had dense traffic. Overtaking on the right (swinging out into the right-hand lane and then immediately getting back into the left-hand lane) remains prohibited.



GERMANY NEW TRAFFIC MEASURES INTRODUCED

In 2019, 3,059 people were killed in road traffic collisions in Germany. According to preliminary results, 216 fewer road users were killed than in 2018, a 7% reduction. The number of road deaths reached its lowest level since statistics began more than 60 years ago. The reduction of road deaths occurred amongst almost all road users groups, although the highest was amongst motorcyclists (-15%), followed by passengers killed in goods vehicles (-14%).

In contrast, from January to November 2019, more pedelec cyclists were killed (+33% or +28 road deaths). The popularity of e-bikes is growing - 1.36 million e-bikes were sold in 2019, a 39% increase compared to 2018.

At the beginning of 2020, Germany brought in a range of new traffic safety measures, many aimed at protecting vulnerable road users. In the update of the traffic regulation, a minimum overtaking distance of 1.5m in town and 2m out of town for the overtaking of pedestrians, cyclists and small electric vehicle drivers by motor vehicles is foreseen. Slowing down to the so-called walking speed (4-7km/h, max.

11 km/h) is compulsory for vehicles over 3.5t turning right, a move to reduce the number of vulnerable road users killed or seriously injured. Sanctions for speeding were also increased: drivers caught speeding by more than 20km/h in urban areas and 25km/h in rural areas face a one-month driving ban. In addition, the fine for breaking the speed limit by up to 10km/h outside built-up areas has doubled from €10 to €20, but is still far less than the €135 in France. German fines are still some of the lowest in Europe.



GREECE ECONOMIC CRISIS AND GOVERNMENTAL INITIATIVES CONTRIBUTED TO ROAD SAFETY PROGRESS

In 2019, Greece saw a stagnation in reducing road deaths compared to 2018 level. However, since 2010, road deaths have been reduced by 44%, down from 1,258 in 2010 to 699 in 2019. 1,709 people were recorded as seriously injured in Greece in 2010 compared to 636 in 2019, which is a 63% reduction.

“Since 2010, Greece has recorded the best road death reduction progress among all EU countries. While the economic crisis has been an important contributor to this development, Greek Authorities have also been working to improve road safety during this period. A large part of the country’s main road network was significantly improved and 2100 km of motorways were operational at the end of 2017, up from 750km in 2007. Several local authorities implemented city mobility and safety plans focusing on improving infrastructure, as well as running awareness campaigns. In addition, new fines were introduced for traffic infringements in the Road Code in 2018 and an amendment of the Penal Code in 2019 led to stricter penalties for drink-driving.”

George Yannis, National Technical University of Athens



NETHERLANDS **NEW IMPETUS TO ROAD SAFETY** **MANAGEMENT CRUCIAL**

The Netherlands recorded a 3% decrease in road deaths between 2018 and 2019. However since 2010, road deaths in the Netherlands have increased by 3%. 21,700 were seriously injured on Dutch roads in 2018. This represents an increase of 14% compared to 2010.

“Although the trend in road deaths in the Netherlands showed a rapid decline between the ‘70s and 2010, since 2010 that decline has stagnated. The government took action and in 2018 a new strategic plan and the third edition of the Sustainable Safety vision were launched, together with an ambition to aim for zero casualties. Today, the authorities in the Netherlands are building on a new, risk-based approach to work towards this ambition and to give renewed impetus to the organisation of road safety management. Safety Performance Indicators are key, as are investments. The government has taken a step by providing €0.5 billion of co-funding for effective infrastructural measures over the coming 10 years.

Some other effective measures – such as the bicycle helmet - are not believed to be broadly supported by the public. However, if we don’t succeed in giving new impetus to such effective road safety measures, road casualty numbers in the Netherlands might not go down much further.”

Letty Aarts, Institute for Road Safety Research (SWOV)

“The overall trend in Denmark since 2013 is one of stagnation. One possible explanation for this could be the lack of a systematic follow up on a number of the recommendations in the previous National Road Safety Action Plan, combined with the relaxation of a number of traffic rules. In 2019 almost half of all road deaths were single vehicle or head on collisions, indicating speeding and distraction are important factors. The number of killed and injured cyclists is generally going the wrong way with a 6% rise since 2009 and e-bikes involved in a continuously growing share of collisions, reflecting their rising popularity.”

Pernille Ehlers, The Danish Road Safety Council



DENMARK **SLOW PROGRESS IN ROAD DEATH** **REDUCTION**

Denmark recorded a sharp rise in road deaths in 2019, up to 14% from 2018, the second highest percentage rise of all the PIN countries. Since 2010, road deaths reduced by 22%, which is below the EU average of 24%. With 199 road deaths in 2019, it is unlikely Denmark will meet its 2020 target of no more than 120 deaths. The number of people seriously injured on Danish roads went down by 12% between 2010 and 2018 but there was an increase of 6% between 2017 and 2019.

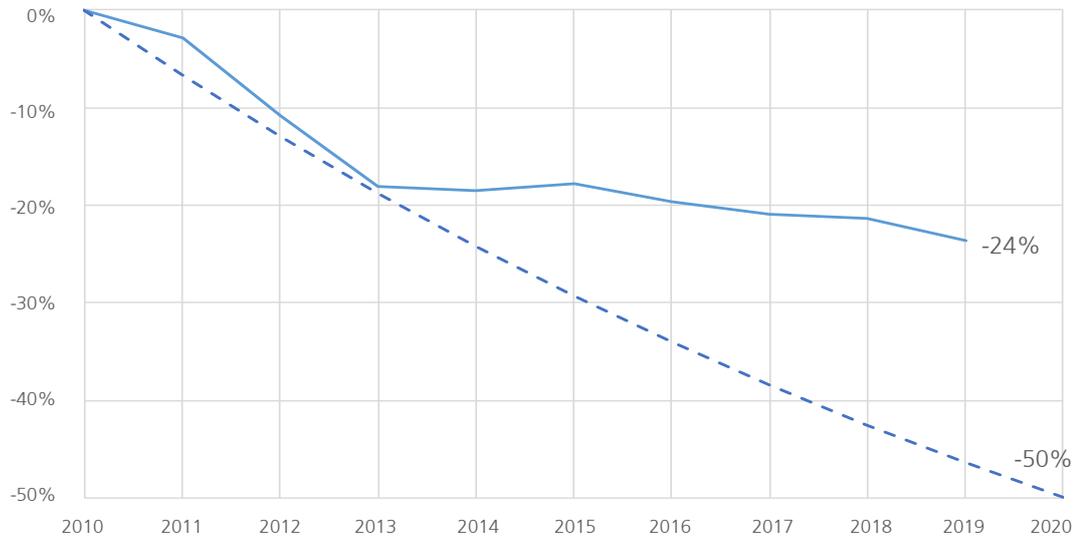
1.3 SIX YEARS OF SLOW PROGRESS

Since 2010, the average annual progress in reducing the number of road deaths in the EU27 Member States has been 2.7%, equivalent to a 24% reduction between 2010 and 2019 (Fig.3). Most of that progress was made in 2011, 2012 and 2013. The number of road deaths in the EU declined by only 7% since 2013.

A 6.7% year-to-year reduction was needed over the 2010-2020 period to reach the 2020 target

through consistent annual progress. Since 2013, the EU as a whole has been struggling to make a breakthrough. For the EU to reach the 2020 target, road deaths now need to be reduced by around 35% from 2019 to 2020 – an unprecedented and highly unlikely possibility. While it is expected that the lockdowns imposed across Europe due to the Covid-19 virus may bring a drop in the number of road deaths in 2020, it seems unlikely that the numbers will fall far enough.

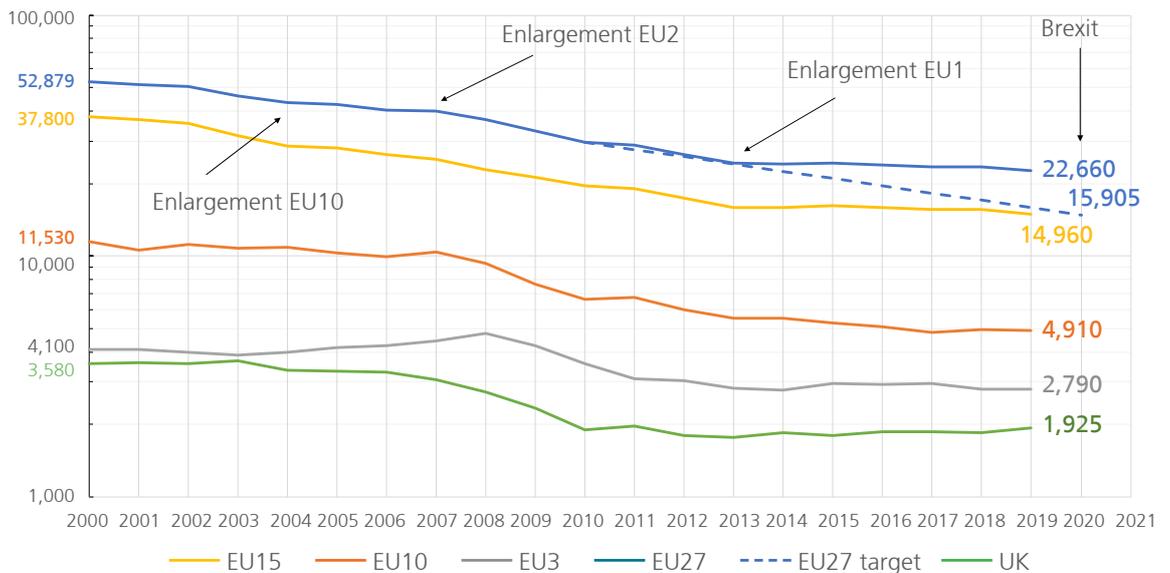
Figure 3. Reduction in the number of road deaths in the EU27 since 2010 (blue line) plotted against the EU target for 2020 (blue dotted line).



The EU27 reduced the number of road deaths by 24% between 2010 and 2019 (Fig.4). The EU14 reduced the number of road deaths by 23% in

the same period, the EU10 by 26% and the EU3 by 22%. There is not a significant difference among the different groups of countries.

Figure 4. Reduction in road deaths since 2000 in the EU27 (blue line), the EU14 (yellow line), the EU10 (red line), the EU3 (grey line) and the UK (green line). The logarithmic scale is used to enable the slopes of the various trend lines to be compared.



¹⁶The EU14 were the first fifteen countries to join the EU minus the United Kingdom: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden. The EU10 were the group of countries that joined the enlarged EU in 2004: Cyprus, Czechia, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia. The EU3 includes the latest three countries to join the EU: Romania and Bulgaria in 2007 and Croatia in 2013.

1.4 SOME 7000 FEWER ROAD DEATHS IN THE EU IN 2019 THAN IN 2010 IS OF CONSIDERABLE VALUE TO THE PEOPLE OF THE EU

There were around 7,000 fewer road deaths in 2019 than in 2010 in the EU27. This reduction is about 6,760 road deaths short of the reduction that would have occurred in 2019 if annual EU progress had been on track towards the 2020 road safety target by a constant year-to-year reduction of 6.7%.

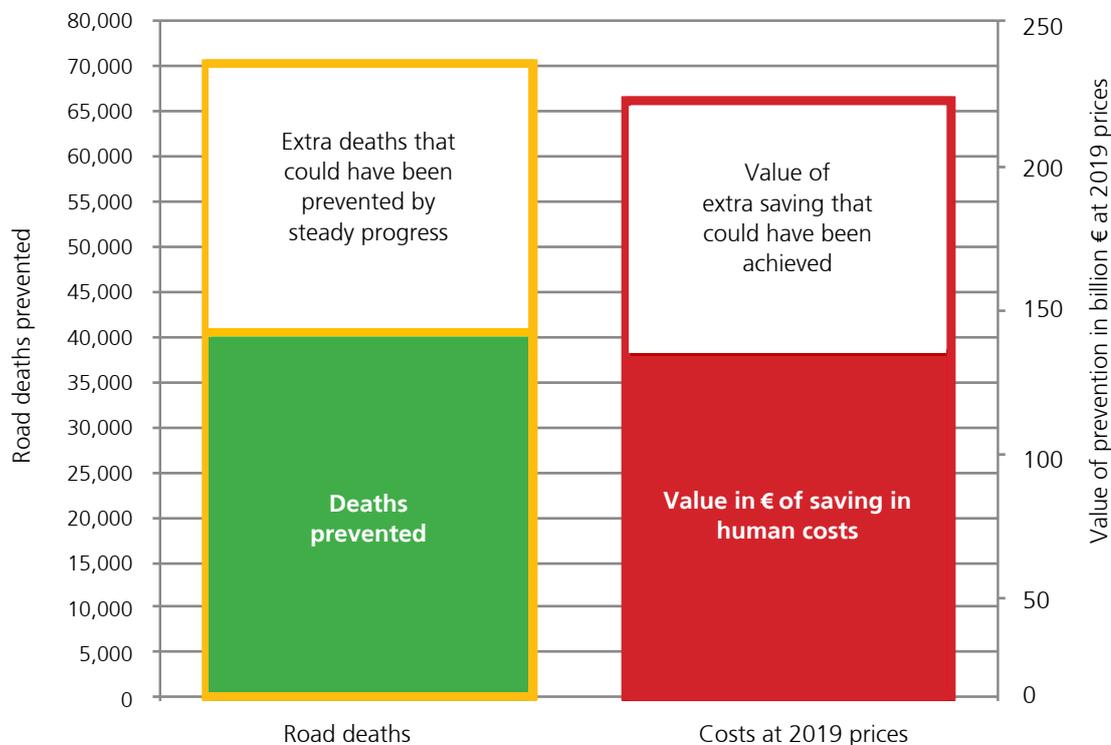
45,600 road deaths have been prevented in the EU over the period 2011-2019 compared to 2010. 29,660 more lives could have been saved if the annual reduction of 6.7% had been achieved (Fig.5, left column).

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

The Value of Preventing one road Fatality (VPF), estimated for 2016 in the EU Handbook on the external costs of transport (2019), has been updated to take account of changes to the economic situation in the intervening years.¹⁶ As a result, we have taken the monetary value for 2019 of the human losses avoided by preventing one road death to be €2.96 million at market prices.¹⁷

The total value of the human losses avoided by reductions in road deaths in the EU27 for 2019 compared to 2010 is thus estimated at approximately €21 billion, and the value of the reductions in the years 2011-2019 taken together compared with nine years at the 2010 rate is about €135 billion (Fig.5, right column). If the EU had moved towards the 2020 road safety target through constant progress of 6.7%, the greater reductions in deaths in the years 2011-2019 would have increased the valuation of the benefit to society by about €87 billion to about €222 billion over those years.

Figure 5. Reduction in the number of road deaths in EU27 over the period 2011-2019 and valuation at 2019 prices and value, together with the additional savings – both in deaths prevented and in value in € of human costs avoided by preventing this number of deaths – that could have been achieved if the EU had moved towards the 2020 road safety target by steady progress.



¹⁶ European Commission (2019), Handbook on the external costs of transport, <http://bit.ly/2t4gAr7>

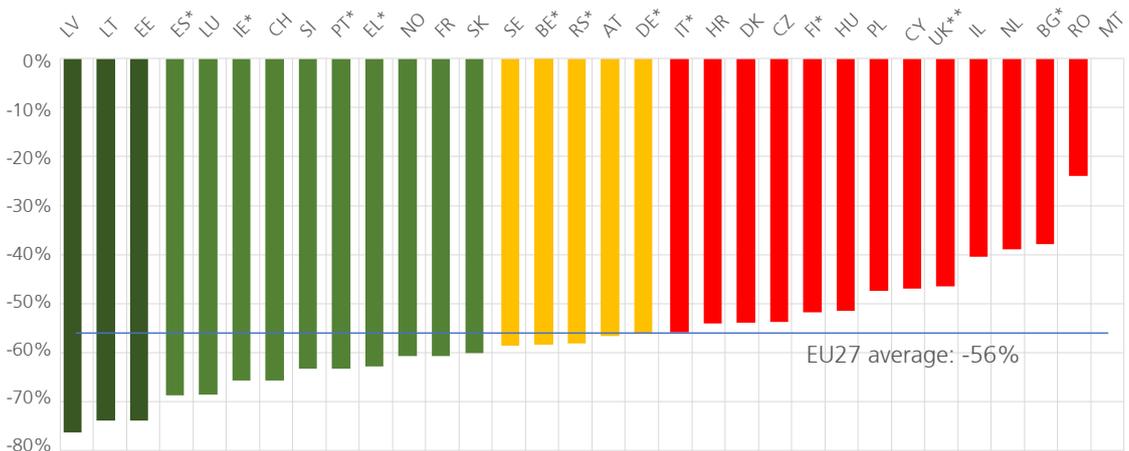
¹⁷ For more information, read ETSC (2020), Updated methodological note to the 14th Road Safety Performance Index (PIN) Report <http://www.etsc.eu/pin14>

1.5 56% 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, the three Baltic States have achieved the highest reductions. Latvia reduced the number of road

deaths by 76% and Lithuania and Estonia by 74% (Fig.6). They are followed by Spain and Luxembourg with a 69% reduction and Ireland with a 66% reduction. However, progress has been slow in Romania with a 24% reduction, Bulgaria with 38% and the Netherlands with 39%.

Figure 6. Relative change in road deaths between 2001 and 2019. *National provisional estimates used for 2019, as final figures for 2019 are not yet available at the time of going to print. **UK data for 2019 are the provisional total for Great Britain for the year ending June 2019 combined with the total for Northern Ireland for the calendar year 2019.

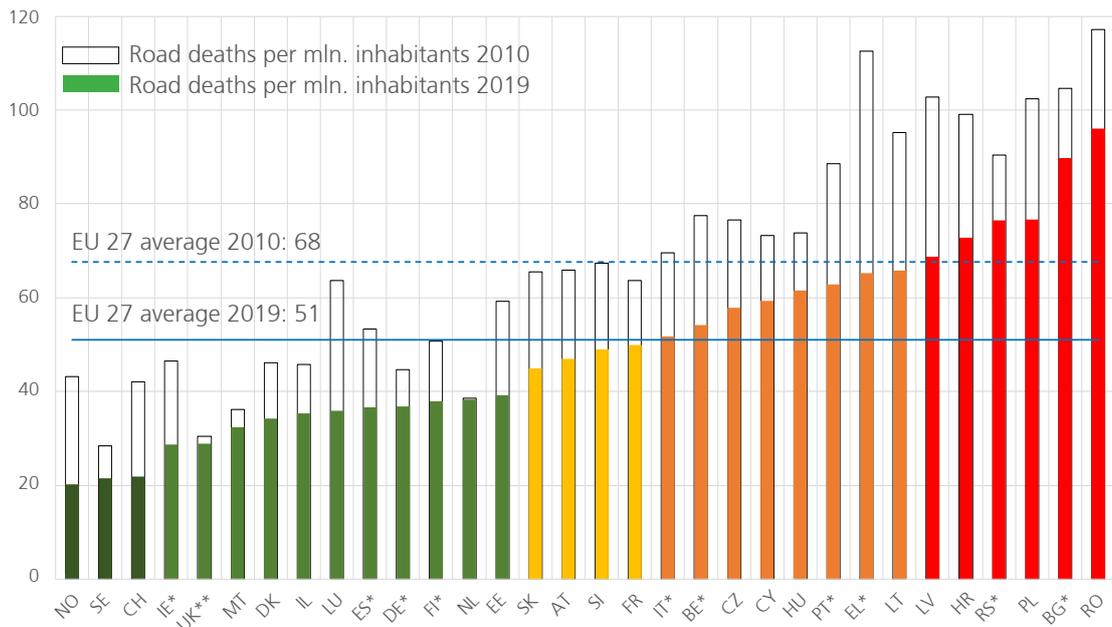


1.6 NORWAY, SWEDEN AND SWITZERLAND ARE THE SAFEST COUNTRIES FOR ROAD USERS

In the EU27, the overall level of road mortality was 51 deaths per million inhabitants in 2019, compared with 68 per million in 2010 (Fig.7). The mortality in the PIN countries still differs by a factor of about four between the groups of countries with the highest and the lowest risk.

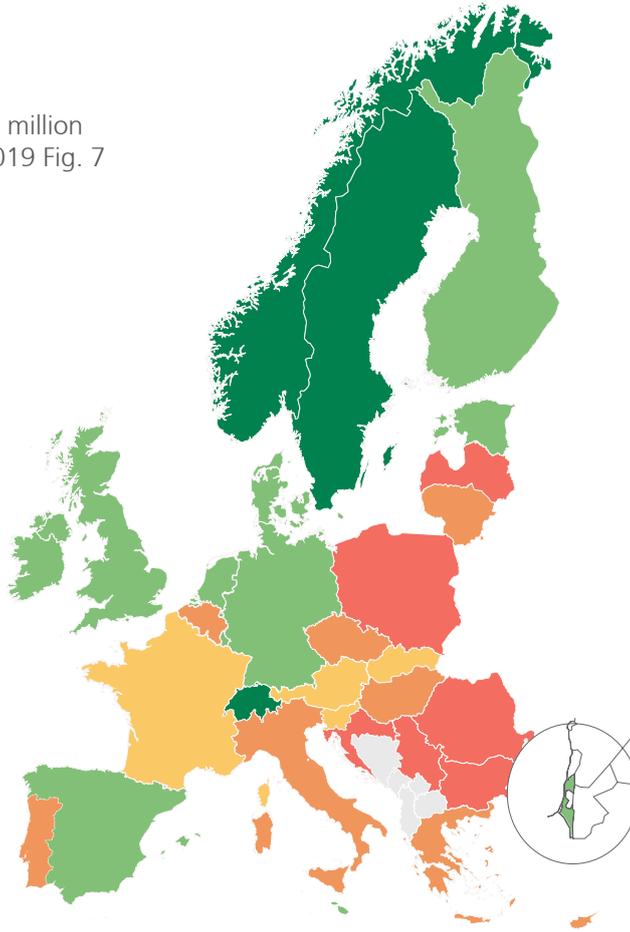
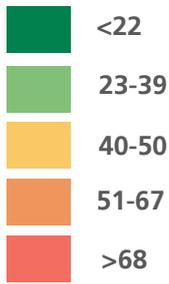
Norway remains the leader among PIN countries with 20 road deaths per million inhabitants, followed by Sweden and Switzerland with fewer than 22 deaths per million inhabitants in 2019. These countries are also among the leaders in terms of road risk (Fig.8). In Ireland, the UK and Malta, mortality is below 33 per million. The highest road mortality is in Romania and Bulgaria with 96 and 90 road deaths per million inhabitants respective

Figure 7. Mortality (road deaths per million inhabitants) in 2019 (with mortality in 2010 for comparison). *National provisional estimates used for 2019, as final figures for 2019 are not yet available at the time of going to print. **UK data for 2019 are the provisional total for Great Britain for the year ending June 2019 combined with the total for Northern Ireland for the calendar year 2019.



MAP 2:

Road deaths per million inhabitants in 2019 Fig. 7



1.7 ROAD DEATHS PER VEHICLE-DISTANCE TRAVELLED

Fig.8 shows the road risk measured in deaths per billion vehicle-km travelled for the 24 PIN countries where up-to-date data are available. This indicator complements the well-established indicator of road mortality (Fig.7).

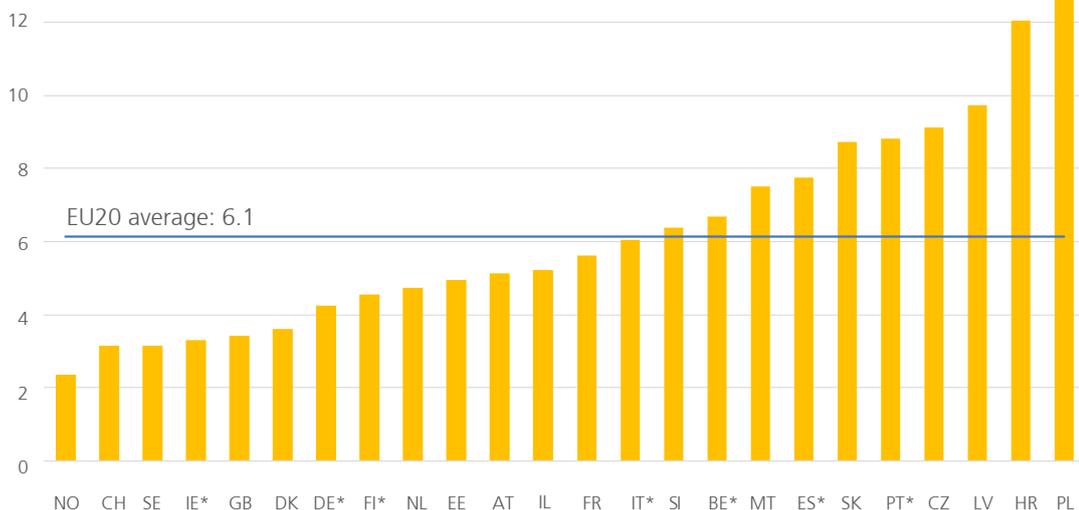
Measured in this way, Norway, Switzerland, Sweden, Ireland, Great Britain, and Denmark have the lowest road risk among the countries collecting up-to-date data (Fig.8). Road risk in Poland and Croatia is almost four times higher than in the countries at the top of the ranking. Differences between the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

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

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

Figure 8. Road deaths per billion vehicle-km.

Average for the latest three years for which both the road deaths and the estimated data on distance travelled are available. 2016-2018 AT, DE, FR, GB, IE, NL, IL. 2015-2017 BE, PL, SI. *Provisional figures for road deaths in 2019. Data for GB is used instead of the UK as since 2014 data on distance travelled in Northern Ireland are not available. EU20 average: EU27 excluding BG, CY, EL, HU, LU, LT, and RO due to lack of data on vehicle distance travelled



RECOMMENDATIONS TO THE NATIONAL LEVEL

- Seek to accelerate progress by all available means, including applying proven traffic law enforcement strategies according to the EC Recommendation on Enforcement.¹⁸
- 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.¹⁹
- 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.
- Adopt post-2020 Road Safety Plans, including national targets for reducing serious injuries based on the MAIS3+ standard alongside the reduction of road deaths and quantitative sub-targets based on performance indicators.
- Use the evidence gathered to devise and update relevant policies. Make the choice of measures based on sound evaluation studies and - where applicable - cost effectiveness considerations, including serious injuries in the impact assessment of counter measures.
- Conduct a thorough qualitative assessment of current road safety strategies to evaluate the levels of implementation and effectiveness of the foreseen road safety measures in reaching road safety targets.
- Designate the maximum number of primary roads to increase the road safety potential of the new Road Infrastructure Safety Management Directive.

RECOMMENDATIONS TO THE EUROPEAN COMMISSION

- Recommit to the ambitious new road safety targets in the upcoming Sustainable and Smart Mobility Strategy.
- Call upon 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 SDG targets, including 3.6 after 2020.

Within the framework of the EU strategic action plan on road safety:²⁰

- Develop clearer priority measures for action, as well as a detailed road map against which performance is measured and delivery made accountable to 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 revise legislation in the medium term (e.g. in 2025);
- Finalise and start collecting with Member States a list of key performance indicators to monitor progress;
- Adopt a long-term operational plan for 2030, including investments in measures and a timetable and structure for delivering the two targets already endorsed;
- Set the strategy within the context of changing mobility patterns including new trends such as automation, increased walking and cycling due to promotion of active travel and an ageing population;
- Extend the application of the instruments of the RISM Directive to cover all EU co-financed roads, all primary roads including all main rural and main urban roads;
- Deliver on the estimated number of deaths and seriously injured prevented by adopting strong secondary legislation implementing the General Safety Regulation²¹;
- 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 2015/413²²:

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

Within the context of the revision of the Driving Licence Directive 2006/126²³:

- 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.

Within the context of the EU strategy on automated mobility²⁴:

- Develop a coherent and comprehensive EU regulatory framework for the safe deployment of automated vehicles.²⁵
- 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 test equivalent to a 'driving test'. This should take into account high-risk scenarios for occupants and road users outside the vehicle.²⁶

¹⁸ EC Recommendation on Enforcement in the Field of Road Safety 2004/345, <http://goo.gl/Vw0zhN>

¹⁹ OECD-ITF (2016), Zero Road Death and Serious Injuries, Leading a Paradigm Shift to a Safe System approach, <https://goo.gl/hTE4BG>

²⁰ ETSC Briefing EU Strategic Action Plan on Road Safety (2019) <https://bit.ly/36Ua5Xe>

²¹ 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>

²² 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>

²³ Directive 2006/126/EC of the European Parliament and of the Council of 20 December 2006 on driving licences, <https://goo.gl/cDJt8i>

²⁴ 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>

²⁵ ETSC (2016), Prioritising the Safety Potential of Automated Driving in Europe, <https://goo.gl/TojCUL>

²⁶ Ibid

PART II

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



02

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

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

In 2020, the European Commission updated the estimated number of serious road traffic injuries - 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 MAIS3+ definition).²⁷

2.2 SOME COUNTRIES REDUCED THE NUMBER OF SERIOUSLY INJURED SINCE 2010

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

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

In most PIN countries, the number of people seriously injured in road collisions according to the national definition are recorded by the police. Sample studies have shown that the actual number is often considerably higher than the officially recorded number based on police reports. In general, the lower the injury severity, the higher the underreporting in police accident statistics tends to be.

²⁷ European Commission (2020), Road Safety: Europe's roads are getting safer but progress remains too slow, <https://bit.ly/37GXv6>

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. 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 collection²⁸.

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

²⁸ SafetyCube (2016), Practical guidelines for the registration and monitoring of serious traffic injuries, Deliverable 7.1, <https://goo.gl/hWHPCG>

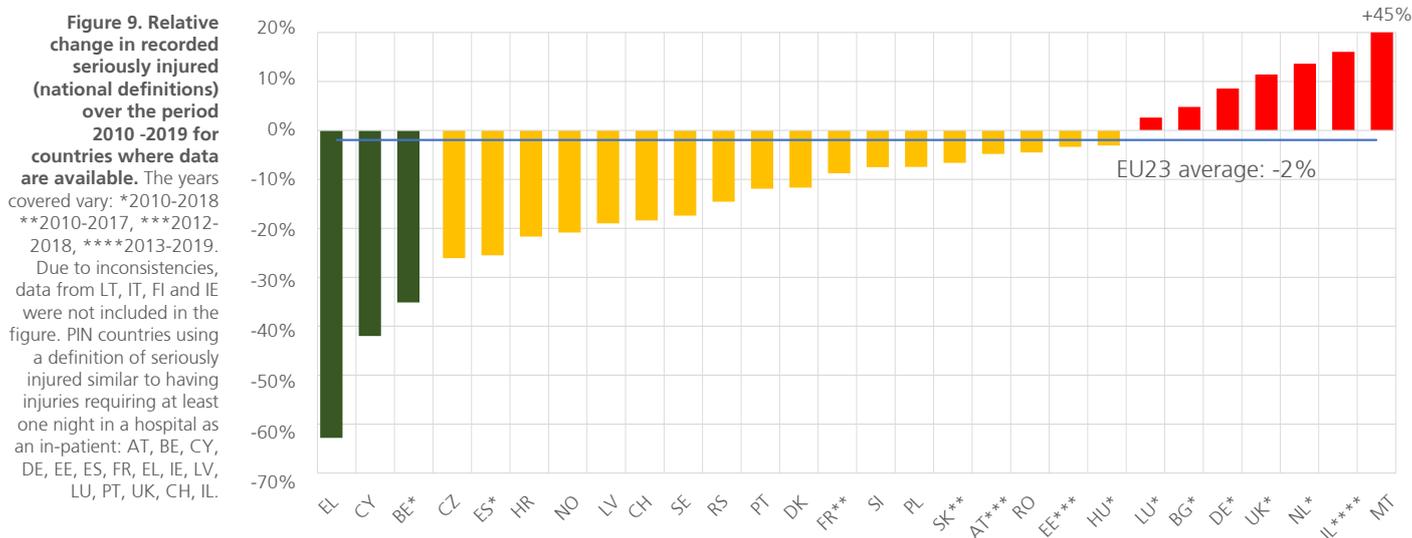
The level of reporting tends to also be lower for pedestrians, cyclists and PTW riders than for car occupants. This is especially the case when no motor vehicle is involved in a collision.

Fig.9 shows the relative change in the number of serious injuries over the period 2010-2019 using current national definitions of serious injury. National definitions supplied by PIN panellists are available in the annexes.

The number of people recorded as seriously injured, based on national definitions, decreased in 18 out of 23 EU Member States that collect data. However, in the EU23 collectively the progress in reducing serious road traffic

injuries remains insignificant since 2010 (Fig.9). Serious injuries recorded in Germany and the Netherlands increased and this has had a significant effect on the EU average as recorded serious injuries in these countries represent 48% of all recorded serious injury data in the EU25. The number of serious injuries increased by 45% in Malta, by 13% in the Netherlands, 11% the UK and 9% in Germany since 2010.

At the other end of the ranking is Greece – it achieved the biggest decrease in the number of recorded serious injuries since 2010 with a 63% reduction, followed by Cyprus with 42% and Belgium with 35%.



INDICATOR FIG. 9 AND 10

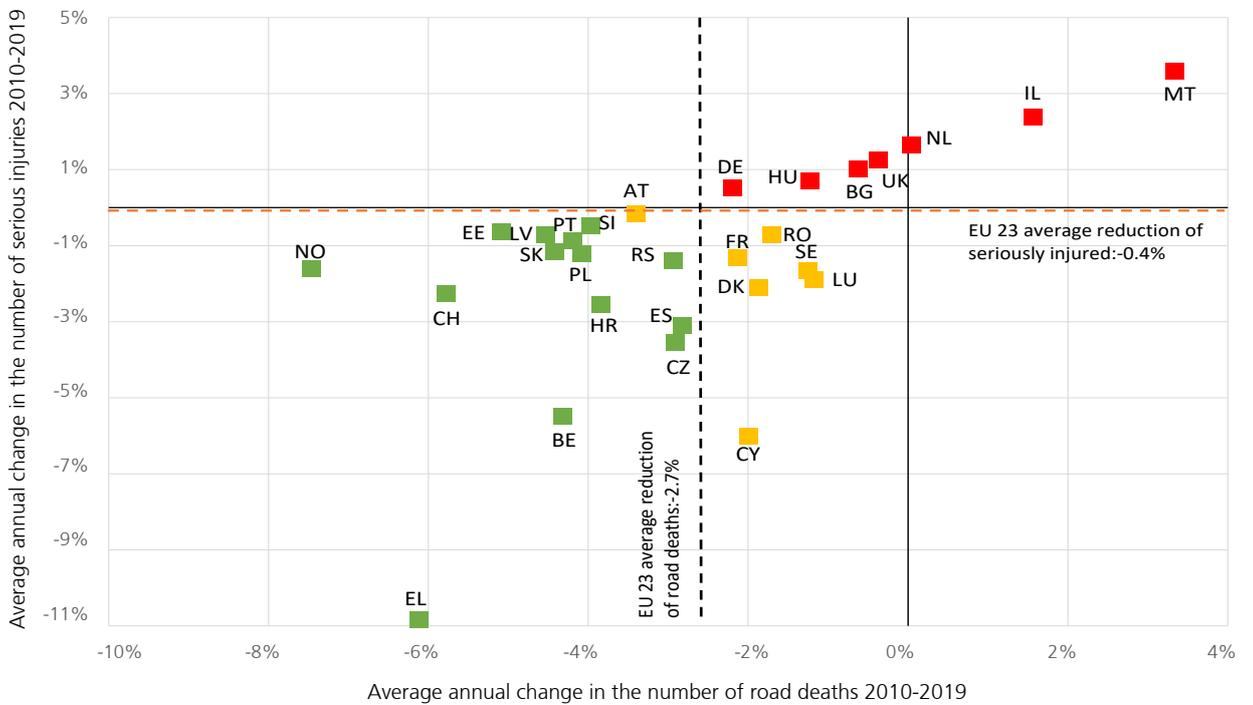
The numbers of seriously injured were supplied by the PIN panellists in each country using the prevailing national definition. The full dataset, together with the national definitions, are available in the annexes. The numbers of people seriously injured based on national definitions in 2019 are provisional in Greece, Portugal and Serbia. Fifteen countries (AT, BE, CY, DE, EE, ES, FR, EL, IE, LV, LU, PT, UK, CH, IL) use similar definitions of severe injuries, spending at least one night in hospital as an in-patient or a close variant of this. In practice, however, in most European countries, there is unfortunately no standardised communication between police and hospitals and the categorisation as “serious” is often made by the police. Within each country, a wide range of injuries is categorised by the police as serious under the applicable definition. They range from lifelong disablement with severe damage to the brain or other vital parts of the body to injuries whose treatment takes only a few days and which have no longer-term consequences.

2.3 ANNUAL REDUCTION IN SERIOUS INJURIES STILL BEHIND ROAD DEATH REDUCTION

Fig.10 gives an overview of national progress in reducing the number of road deaths and the numbers of serious injuries (based on each national definition) over the last ten years. The figure aims to indicate to what extent the two have moved at a similar pace. The average annual relative change in road deaths is plotted on the horizontal axis, and the average annual relative change in serious injuries on the vertical axis, while the EU averages of -2.7% and -0.4% respectively are shown by 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. Estonia, Greece, Norway, Switzerland, Latvia, Belgium, Slovakia, Slovenia, Portugal, Serbia, Poland, Czechia, Spain and Croatia 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.

Figure 10. Estimated average annual change in the number of seriously injured according to the national definition over the period 2010-2019 for countries where data are available, plotted against the estimated average annual change in road deaths over the same period. The years covered vary: 2010-2019 for CH, CY, CZ, DK, EL, HR, LV, MT, NO, PL, PT, RO, RS, SE, SI. 2010-2018 for BE, BG, DE, ES, HU, NL, UK. 2010-2017 for FR and SK. 2012-2018 for EE and AT. 2013-2019 for IL. Due to inconsistent data Lithuania, Italy, Finland and Ireland could not be included in the figure.



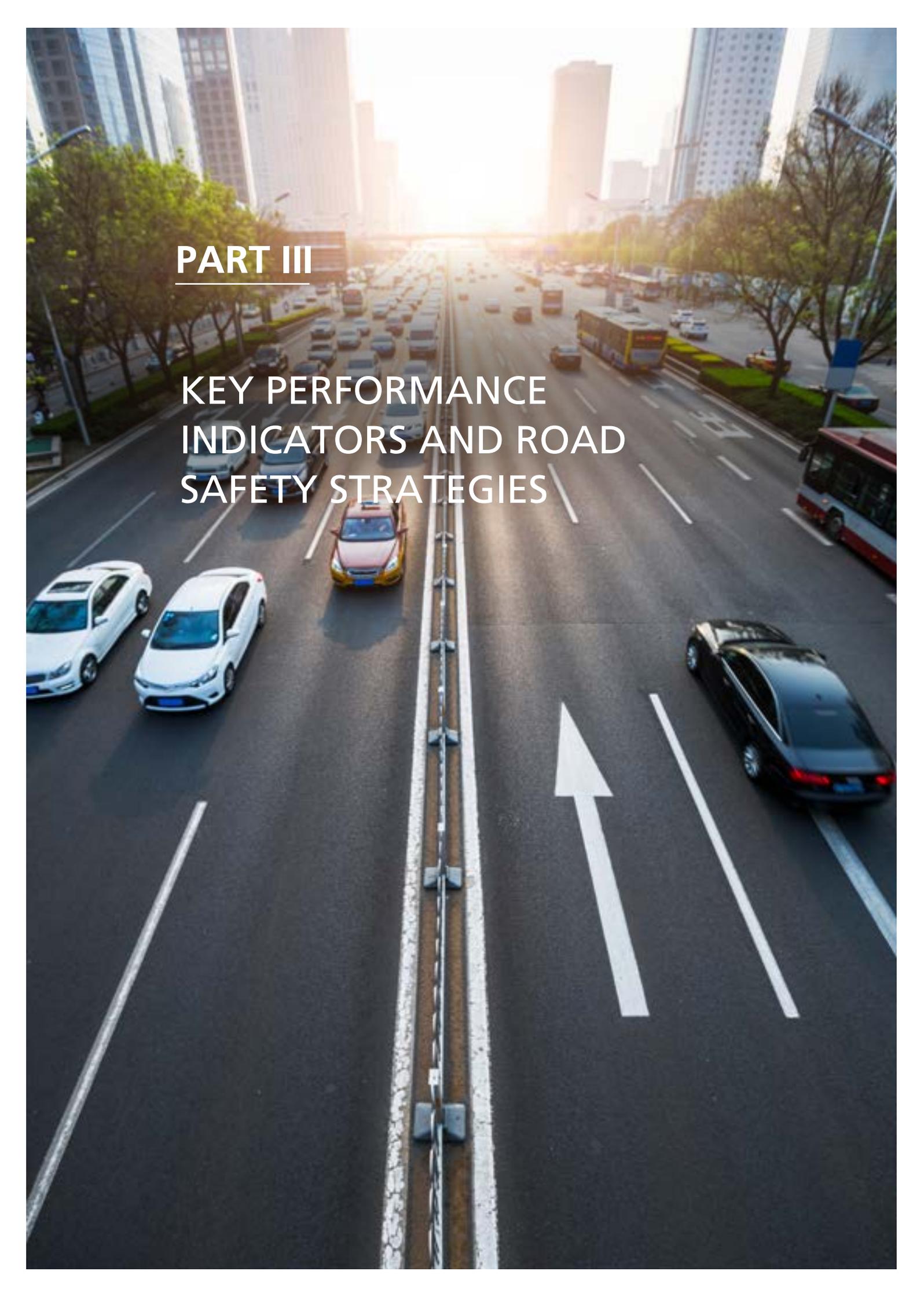
RECOMMENDATIONS TO THE NATIONAL LEVEL

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

RECOMMENDATIONS TO EU INSTITUTIONS

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



An aerial, high-angle photograph of a wide, multi-lane city street during sunrise. The sun is low on the horizon, creating a strong lens flare and casting long, soft shadows. The street is filled with traffic, including cars, buses, and taxis. Tall skyscrapers line the street, and trees are visible on the sides. The overall scene is a busy urban environment.

PART III

KEY PERFORMANCE
INDICATORS AND ROAD
SAFETY STRATEGIES

03

3.1 ROAD SAFETY STRATEGIES TO 2030 WIDELY ADOPTED

Country efforts will be critical for the implementation of the Safe System approach

across the EU and 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. Road safety strategies in the PIN countries. Green = yes, yellow = to be determined, grey = data not available at time of going to press (tbd – to be determined)

	New National Road Safety Strategy	Time period of new strategy	Road death reduction target	Serious road injury reduction target
AT	YES	2021-2030	YES (tbd)	YES (tbd)
BE	Under development	2021-2030	Under development	Under development
BG	YES	2020-2030	n/a	n/a
CY	YES	2021-2030	YES (tbd)	YES (tbd)
CZ	YES	2021-2030	EU target	EU target
DE	Under development	2021-2030	YES	LIKELY
DK	Under development	2021-2030	LIKELY	LIKELY
EE	Current 2016-2025		52% reduction	31% reduction
ES	YES	2021-2030	n/a	n/a
FI	Under development	2022-2026	n/a	n/a
FR	Current 2018-2021		n/a	n/a
EL	Under development	2021-2030	YES (tbd)	n/a
HR	YES	2021-2030	YES (tbd)	YES (tbd)
HU	Current 2020-2022		EU target	EU target
IE	YES	2021-2030	YES (tbd)	YES (tbd)
IT	Under development	2021-2030 (according to EU)	EU target (tbd)	EU target (tbd)
LU	YES	2019-2023	Vision Zero	Vision Zero
LV	Under development			
LT	YES	2020-2030	EU target	EU target
MT	Current 2014-2024		n/a	n/a
NL	YES	2018-2030	(tbd)	(tbd)
PL	Under development	2020-2030	n/a	n/a
PT	Current 2017-2020		56% reduction	178 per/mln inhabs
RO	Current 2016-2020		n/a	n/a
SE	Current 2007-2020		EU target	25% reduction
SI	Current 2013-2022		EU target	EU target
SK	Under development	2021-2030	EU target	EU target
UK	Current 2019-2021		n/a	n/a
CH	Current - no time limit		100 road deaths by 2030	2500 serious injuries by 2030
IL	Under development		n/a	n/a
NO	Current 2018-2021		Max. 350 road deaths and serious injuries	
RS	Current 2015-2021		n/a	n/a

3.2 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 Action plan on Road Safety.²⁹

In an initial phase, eight have been chosen which will form the basis for monitoring progress in 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 as of 2021. The aim is to continue strengthening the existing KPIs and to develop additional ones.³⁰ To facilitate the work on data collection, the European Commission will offer financial support to the Member States. The longer-term goal is to collect comparable data, bearing in mind that some differences in national rules will constrain comparison for some indicators.

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 and can detect the emergence of problems at an earlier stage³¹. But information gathered from the 32 PIN countries shows that there is some way still to go in terms of developing some of these KPIs and collecting the data. The KPI on safety belts seems the most advanced with 23 PIN countries reporting they collect data for this KPI. Likewise, KPIs for speed compliance and the use of protective equipment are also currently widely used. The infrastructure, post-crash care and vehicle safety KPIs seem the least well advanced. It is important to note that countries apply different methodologies in collecting KPI data, the level of detail of each KPI and the frequency on how often KPI data are collected differ between countries.

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

- 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.
- Collect, and report to the European Commission, data to deliver the Key Performance Indicators included in the EU Road Safety Policy Framework 2021-2030.

RECOMMENDATION TO THE EUROPEAN COMMISSION ON KPIs

- In the medium term, aim to set KPI outcome targets, such as to match the outcome performance of the three best performing countries, for each KPI.
- Publish updated data regularly, at least every two years ahead of the biennial results conference organised by the European Commission.
- Extend and improve the current KPIs based on ETSC recommendations.³²
- Support Member States in collecting harmonised data.

³² ETSC (2019), Briefing EU Strategic Action Plan on Road Safety, <https://bit.ly/36Ua5Xe>

²⁹ ETSC (2019), Briefing EU Strategic Action Plan on Road Safety, <https://bit.ly/36Ua5Xe>

³⁰ Ibid

³¹ ETSC (2018) Briefing: 5th EU Road Safety Action Programme 2020-2030. <https://bit.ly/2LuTDBW>

Table 2. Progress towards collecting EU KPIs. Green = the KPI data are being collected, red = the KPI data are not being collected, orange = under discussion and n/a = the data were not available at the time of going to press.

	1. Speed	2. Safety belt	3. Protective equipment	4. Alcohol	5. Distraction	6. Vehicle safety	7. Infrastructure	8. Post-crash care
AT	YES	YES	YES	n/a	YES	n/a	n/a	n/a
BE	YES	YES	YES	YES	YES	YES	YES	YES
BG	NO	NO	NO	NO	NO	NO	NO	NO
CY	YES	NO	NO	NO	NO	NO	NO	YES
CZ	YES	YES	YES	YES	YES	n/a	n/a	n/a
DE	n/a	YES	YES	n/a	n/a	n/a	n/a	YES
DK	YES	YES	n/a	n/a	n/a	n/a	n/a	n/a
EE	YES	YES	YES	YES	YES	NO	NO	NO
ES	YES	YES	YES	YES	YES	n/a	n/a	n/a
FI	YES	YES	YES	YES	n/a	YES	YES	n/a
FR	YES	YES	YES	YES	YES	YES	NO	NO
EL	NO	NO	NO	NO	NO	NO	NO	NO
HR	YES	YES	YES	YES	YES	YES	YES	YES
HU	YES	YES	YES	YES	YES	NO	NO	YES
IE	YES	YES	YES	YES	YES	NO	NO	NO
IT	n/a	YES	YES	n/a	n/a	n/a	n/a	n/a
LU*	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
LV	n/a	YES	YES	n/a	n/a	n/a	n/a	n/a
LT	YES	YES	n/a	YES	YES	n/a	n/a	n/a
MT	NO	NO	NO	NO	NO	NO	NO	NO
NL	YES	Planned	Discussed	Discussed	Planned	Planned	Planned	n/a
PL	NO	YES	NO	YES	NO	NO	NO	NO
PT	NO	NO	NO	NO	NO	NO	NO	NO
RO	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
SE	YES	YES	YES	YES	n/a	YES	YES	n/a
SI	YES	YES	YES	YES	NO	NO	NO	NO
SK	NO	NO	NO	NO	NO	NO	NO	NO
GB	YES	YES	YES	YES	YES	n/a	NO	n/a
CH	YES	YES	YES	NO	NO	NO	NO	NO
IL	YES	YES	YES	n/a	n/a	n/a	n/a	n/a
NO	YES	YES	YES	YES	NO	NO	NO	NO
RS	YES	YES	YES	YES	YES	NO	NO	NO



PART IV

**ESTONIA
WINNER OF 2020 ROAD
SAFETY PIN AWARD**

ESTONIA

WINNER OF THE 2020 ROAD SAFETY PIN AWARD

INTERVIEW WITH TAAVI AAS, ESTONIAN MINISTER OF ECONOMIC AFFAIRS AND INFRASTRUCTURE



ETSC: According to you, which measures yielded the best road safety results in Estonia in the last five years?

To gain a sustainable and long-term positive effect on road safety, we saw the need to implement complex measures in the three main parts of the traffic system: road users, vehicles and infrastructure.

Road infrastructure is an area where we have been very active over the last few years. Financial support for road infrastructure is planned 4 years in advance. Over the last few years we have invested significantly, not only in high-capacity 2+2 rural road safety, but also building up 2+1 roads. To eliminate the risk of head-on collisions we implemented central guardrail separation on 1+1 roads.

Several years ago, we developed and implemented a high risk site management system based on scientifically approved road collision risk assessment that helped us to be proactive and prevent the most difficult consequences of road collisions.

It's worth mentioning that local authorities are also doing their best to contribute to improving

road safety. Over the last few years, we saw a definite shift away from developing vehicle-oriented cities and towards cities focussed on vulnerable roads users. Distributing city space among all road users, with particular attention paid to the needs of the most vulnerable groups, is the right way forward. The improvement in pedestrian and cyclist safety has been remarkable during these years.

As for road user safety, it should be stressed that we emphasised taking extensive measures to prevent speeding and alcohol abuse in traffic. We systematically and consistently carried out traffic education and safety campaigns. These were the key measures implemented during the last five years, which generated the best results at creating a more knowledgeable road user.

Last but not least, I should mention the role of the effective road safety management system that we have built. It has been a joint effort on all fronts to create a more safe and friendly environment for everyone using our roads and infrastructure. I would like to thank all those road safety specialists, police, engineers, road designers, civil servants, analysts and academics, who work passionately to make Estonian roads safer.

ETSC: Estonia introduced its Road Safety Programme 2016-2025 relatively recently. How do you ensure smooth coordination between the different authorities responsible for the implementation of the road safety strategy?

The recently developed comprehensive road safety management model aims to be clear, uniform and functional so that it enables cooperation on a national, regional and local level, involving as many parties as possible to solve road safety-related issues.

The key road safety policy document is the Road Safety Programme. The goals of the Road Safety Programme are covered in a four-year implementation plan, which follows the state budget strategy, and is updated every year. The implementation plan is coordinated with ministries and approved by the Government. The performance and effectiveness of the measures are assessed annually.

The Traffic Committee was created by the Estonian Ministry of Economic Affairs and Communications to guarantee smooth coordination on the highest governmental level.

Thanks to the commitment and a strong leadership of the Estonian Road Administration in implementing and managing the Road Safety Programme, the Traffic Committee can easily monitor its implementation and help with obstacles that might occur along the way. Besides, the Estonian Road Administration has a key role in directing the work of the Traffic Committee and monitoring the Road Safety Programme, but also in building consensus among the opinions and activities of different parties.

Municipalities are also involved in the implementation of the Road Safety Programme. Coordinating road safety improvement was not always easy. Not all parties concerned were ready to share the responsibility for road safety. But they eventually saw the need to cooperate and act together. All parties saw the need to adopt the Vision Zero principles, which establish the steps all parties should take to further increase the safety of our roads.

ETSC: How are municipalities involved in the road safety work in Estonia?

There are measures in the Road Safety Programme that local authorities are responsible for. All these measures focus on the safety of vulnerable road users: for example improvement of crossings, 30km speed limit zones and traffic calming, lighting improvements, etc.

Every year the Estonian Road Administration runs a series of seminars for local authority specialists, where they explain the tasks of the municipalities and how can they improve road safety. For the biggest cities, such as Tallinn, Tartu, Narva and Pärnu, where most Estonian traffic is concentrated, we worked out an additional government-supported mechanism

to improve road safety at pedestrian crossings.

There are 79 different local authorities in Estonia. Their territory, population, traffic, financial strength, number of civil servants and expertise differ a lot. That's why the Estonian Road Administration brings them together and supports them to achieve safer traffic goals. Over the last five years, the Administration has organised a number of traffic committees which allow local municipalities to meet other public or private partners, discuss and solve transport safety and mobility issues and decide on high risk sites and investment needs.

ETSC: The level of drink-driving enforcement in Estonia is among the highest among EU countries. How did Estonia start prioritising tackling drink-driving and how do you gather the necessary resources?

As the direct link between drink-driving and risk of road collisions is evident, there is a strong need to fight driving under the influence. Police started special road-side controls in 1998 in close cooperation with their Finnish colleagues. Since then Estonia has become one of the leading countries in the European Union on the number of controls. Last year there were 921,000 alcohol checks, or approximately 1.42 controls per driver.

Moreover, Estonia's general alcohol policy tackles alcohol consumption problems in all spheres of life, and includes social and media campaigns, restrictions on alcohol availability and a police/social zero-tolerance priority. All these factors are having a positive impact on changing social attitudes: the BAC level in Estonia is 0.2mg/l for all drivers and public opinion shows that this rate should not be raised.

ETSC: Speed is among the main killers on the roads. What measures did Estonia take to tackle this problem?

Unfortunately, in Estonia there is no zero-tolerance for speeding, like there is for drink-driving. It is an ongoing process to change the attitude and make people understand that speed kills. The main measures used over the last few years to tackle speeding include traffic enforcement, infrastructure speed management

measures and social campaigns. May 2020 marked 10 years since we started using speed cameras on our roads. Last year we introduced mobile speed cameras as well.

In 2019 the police started to use a faster procedure to process traffic violations, which is simple, less time-consuming and paperless. During that year, more than 53% of all reported traffic violations were processed using the faster procedure.

ETSC: The seatbelt wearing rates in Estonia increased significantly (from 92% for front seat occupants and 64% for rear seat car passengers in 2010 to 97% for front-seat passengers and 89% for rear seat occupants in 2019). How did Estonia achieve this improvement?

It takes years to change the attitude of road users. We started our first public campaigns and education programmes on seatbelt wearing in the late 1990s. Since then these measures together with police enforcement have become the norm. Also, in-vehicle technology has helped a lot.

It is difficult to wish for better results than what we have achieved on seatbelt wearing rates through road safety campaigns. In the future, we will also work on a new approach in traffic education and prevention that will focus on driver education and enforcement.

ETSC: What has Estonia been doing to improve the safety of pedestrians and cyclists?

Pedestrian and cyclist safety improvements were the most noticeable. We have managed to significantly decrease the number of road fatalities on rural roads during the night time. For example, the number of night time pedestrian deaths decreased from 15 to 5 in 2015-2019. Estonia is implementing all the useful measures such as public campaigns and education on the use of reflectors, safer road crossing facilities, modern lightning technologies and traffic calming. Also, road designers, planners and architects pay more and more attention to vulnerable road user needs.

ETSC: How is Estonia tackling serious road traffic injuries?

There is a strategic goal in the Road Safety Programme 2016 – 2025 to decrease the number of seriously injured from 475 to 330 by 2025. I am sure that to achieve a lasting effect on road safety we should tackle both road fatalities and serious injuries. We should work on avoiding serious injuries data deviations and improving the quality of these data as well as cooperating with the health sector. When speaking about road user safety, it should be stressed that preventing excessive speeding and alcohol abuse in traffic needs to be carried out systematically and consistently through traffic education and safety campaigns.

ETSC: Last year the European Commission published its Road Safety Policy Framework 2021-2030 which included several Key Performance Indicators (KPIs). What elements of this policy framework were particularly welcomed by Estonia and which do you believe will be more of a challenge? Which KPI data are Estonia planning to collect?

We have already been monitoring most of the European Commission (EC) proposed KPIs since the adoption of the Road Safety Programme in 2016. We believe that the Road Safety Policy Framework 2021-2030 is an important guideline for our national policy framework. That is why we implemented a lot the KPIs on vehicle safety and now we are looking forward to the European Commission and the European New Car Assessment Programme (Euro NCAP) cooperation on star-rating use.

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

I can't but stress that we made impressive progress on knowledge-based policy-making and road safety management, which has been of tremendous help in reaching our goals. We use the research information from all over the world to introduce new scientifically approved methods e.g. to assess the effects of interventions and map out the possible risks. Our latest research projects focus on the use of

machine learning for road accident forecasting and intervention planning. We cooperate with academics and students to implement their findings in practice.

ETSC: What are the key road safety challenges that Estonia faces today? How are you planning to address the challenges in the long term (e.g. in the post-2025 strategy)?

One of the biggest challenges we are tackling right now is a new safe speed limit concept for our state road network. Speeding is still one of the leading causes of road collisions and road deaths. The Traffic Committee has initiated the process to develop a demerit point system concept and draft a legal act. A paradigm shift in traffic space sharing, sustainable mobility and modal shift will help to change towards healthier and more ecologically friendly means of transport.

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

There will always be somebody who does some things better than you and can be an example. We often look to Sweden as an example, mainly because of the same climate and Nordic mentality. We have already taken over their practices in Vision Zero and 2+1 roads, but we still have a way to go to achieve the desired results. In addition to Sweden, the Netherlands and Great Britain are also countries with great solutions in improving road safety.

ANNEXES

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

Table 1 (Fig. 1,2) Road deaths and relative change in road deaths between 2018 and 2019 and between 2010 and 2019

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		Fig.2 2018-2019		Fig.2 2010- 2019
AT*	552	523	531	455	430	479	432	414	409	416	LU	-38.9%	NO	-48.6%
BE*	841	862	770	764	745	762	670	609	604	620	SE	-31.8%	EL*	-44.4%
BG*	776	658	605	601	655	708	708	682	611	628	EE	-22.4%	CH	-42.8%
CY	60	71	51	44	45	57	46	53	49	52	CH	-19.7%	LV	-39.5%
CZ	802	773	742	654	688	737	611	577	658	617	FI*	-12.6%	LT	-38.5%
DE*	3,651	4,009	3,601	3,340	3,368	3,459	3,206	3,177	3,275	3,059	MT	-11.1%	PT*	-34.5%
DK	255	220	167	191	183	178	211	183	175	199	LV	-10.8%	EE	-34.2%
EE	79	101	87	81	78	67	71	48	67	52	PT*	-9.0%	IE*	-33.0%
ES*(1)	2,478	2,060	1,903	1,680	1,688	1,689	1,810	1,830	1,806	1,724	DE*	-6.6%	LU	-31.3%
FI*	272	292	255	258	229	270	258	238	239	209	HR	-6.3%	ES*	-30.4%
FR	3,992	3,963	3,653	3,268	3,384	3,461	3,477	3,448	3,248	3,244	CZ	-6.2%	HR	-30.3%
EL*	1,258	1,141	988	879	795	793	824	731	700	699	IT*	-6.1%	SK	-29.0%
HR	426	418	393	368	308	348	307	331	317	297	HU	-4.9%	BE*	-26.3%
HU	740	638	605	591	626	644	565	624	633	602	ES*	-4.5%	SI	-26.1%
IE*	212	186	163	188	192	162	182	156	140	141	RS*	-2.6%	PL	-25.5%
IT*	4,114	3,860	3,753	3,401	3,381	3,428	3,283	3,378	3,334	3,130	NL	-2.5%	AT	-24.6%
LU	32	33	34	45	35	36	32	25	36	22	RO	-0.2%	IT*	-23.9%
LV	218	179	177	179	212	188	158	136	148	132	EL*	-0.1%	FI*	-23.2%
LT	299	297	302	258	267	242	192	192	173	184	FR	-0.1%	CZ	-23.1%
MT	15	17	9	18	10	11	22	19	18	16	NO	0.0%	DK	-22.0%
NL(2)	640	661	650	570	570	620	629	613	678	661	IE*	0.7%	RO	-21.6%
PL	3,907	4,189	3,571	3,357	3,202	2,938	3,026	2,831	2,862	2,909	PL	1.6%	RS*	-19.1%
PT*(3)	937	891	718	637	638	593	563	602	675	614	AT	1.7%	BG*	-19.1%
RO	2,377	2,018	2,042	1,861	1,818	1,893	1,913	1,951	1,867	1,864	BE*	2.7%	FR	-18.7%
SE	266	319	285	260	270	259	270	253	324	221	BG*	2.8%	HU	-18.7%
SI	138	141	130	125	108	120	130	104	91	102	UK**	4.7%	SE	-16.9%
SK	345	324	296	223	259	274	242	250	229	245	CY	6.1%	DE*	-16.2%
UK*(4)	1,905	1,960	1,802	1,769	1,854	1,804	1,860	1,856	1,839	1,926	LT	6.4%	CY	-13.3%
CH	327	320	339	269	243	253	216	230	233	187	SK	7.0%	IL	-8.2%
IL	352	341	263	277	279	322	335	321	276	323	SI	12.1%	UK**	1.1%
NO	210	168	145	187	147	117	135	106	108	108	DK	13.7%	NL	3.3%
RS*	660	731	688	650	536	599	607	579	548	534	IL	17.0%	MT	6.7%
EU27	29,682	28,844	26,481	24,296	24,184	24,416	23,838	23,455	23,366	22,659	EU27	-3.0%	EU27	-23.7%

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

* National provisional estimates used for 2019, as the final figures for 2019 were not yet available at the time of going to print.

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

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

(3) PT - increases in Portugal in 2010 and 2011 are partly due to change in reporting methods. Like Spain prior to 2010 the number of people.

(4) UK - 2019 estimate is based on GB provisional total for the year ending June 2019 (1870 deaths) and the provisional data for Northern Ireland for the calendar year 2019 (56 deaths). 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.

Table 2 (Fig.6) Road deaths and relative change in road deaths between 2001 and 2019 and estimated average relative annual change 2010-2019.

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Fig.6 2001-2019	Fig.10 Annual average change in the number of road deaths over the period 2010-2019			
AT	958	956	931	878	768	730	691	679	633	552	523	531	455	430	479	432	414	409	416	LV	-76.3%	AT	-3.4%	2012-2018
BE	1,486	1,355	n/a	n/a	1,089	1,073	1,071	944	943	841	862	770	764	745	762	670	609	604	620	LT	-73.9%	BE*	-4.3%	2010-2018
BG	1,011	959	960	943	957	1,043	1,006	1,061	901	776	658	605	601	655	708	708	682	611	628	EE	-73.9%	BG*	-0.6%	2010-2018
CY	98	94	97	117	102	86	89	82	71	60	71	51	44	45	57	46	53	49	52	ES*	-68.8%	CY	-2.0%	
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	LU	-68.6%	CZ	-2.9%	
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	IE*	-65.7%	DE*	-2.2%	2010-2018
DK	431	463	432	369	331	306	406	406	303	255	220	167	191	183	178	211	183	175	199	CH	-65.6%	DK	-1.9%	
EE	199	223	164	170	169	204	196	132	100	79	101	87	81	78	67	71	48	67	52	SI	-63.3%	EE	-6.6%	2012-2018
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	1,724	PT*	-63.2%	ES*	-2.8%	2010-2018
FI	433	415	379	375	379	336	380	344	279	272	292	255	258	229	270	258	238	239	209	EL*	-62.8%	FI*	-2.4%	Excluded from Figure 10
FR	8,253	7,742	6,126	5,593	5,318	4,709	4,620	4,275	4,273	3,992	3,963	3,653	3,268	3,384	3,461	3,477	3,448	3,248	3,244	FR	-60.7%	FR	-2.1%	2010-2017
EL	1,880	1,634	1,605	1,670	1,658	1,657	1,612	1,553	1,456	1,258	1,141	988	879	795	793	824	731	700	699	NO	-60.7%	EL*	-6.1%	
HR	647	627	701	608	597	614	619	664	548	426	418	393	368	308	348	307	331	317	297	SK	-60.1%	HR	-3.8%	
HU	1,239	1,429	1,326	1,296	1,278	1,303	1,232	996	822	740	638	605	591	626	644	565	624	633	602	SE	-58.6%	HU	-1.2%	2010-2018
IE	411	376	335	374	396	365	338	279	238	212	186	163	188	192	162	182	156	140	141	BE*	-58.3%	IE*		Excluded from Figure 10
IT	7,096	6,980	6,563	6,122	5,818	5,669	5,131	4,725	4,237	4,114	3,860	3,753	3,401	3,381	3,428	3,283	3,378	3,334	3,130	RS	-58.1%	IT*	-2.5%	Excluded from Figure 10
LU	70	62	53	50	47	43	45	35	48	32	33	34	45	35	36	32	25	36	22	AT	-56.6%	LU	-1.2%	2010-2018
LV	558	559	532	516	442	407	419	316	254	218	179	177	179	212	188	158	136	148	132	DE*	-56.2%	LV	-4.5%	
LT	706	697	709	752	773	760	740	499	370	299	297	302	258	267	242	192	192	173	184	IT*	-55.9%	LT		Excluded from Figure 10
MT	16	16	16	13	16	10	14	15	21	15	17	9	18	10	11	22	19	18	16	HR	-54.1%	MT	3.3%	
NL(2)	1,083	1,069	1,088	881	817	811	791	750	720	640	661	650	570	570	620	629	613	678	661	DK	-53.8%	NL	0.0%	2010-2018
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	CZ	-53.7%	PL	-4.1%	
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	614	FI*	-52.7%	PT*	-4.2%	
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	HU	-51.4%	RO	-1.7%	
SE(4)	534	515	512	463	423	428	454	380	341	266	319	285	260	270	259	270	253	324	221	PL	-47.4%	SE	-1.3%	
SI	278	269	242	274	257	262	293	214	171	138	141	130	125	108	120	130	104	91	102	CY	-46.9%	SI	-4.0%	
SK	614	610	645	603	560	579	627	558	347	345	324	296	223	259	274	242	250	229	245	UK**	-46.5%	SK	-4.4%	2010-2017
UK	3,598	3,581	3,658	3,368	3,337	3,300	3,056	2,718	2,337	1,905	1,960	1,802	1,769	1,854	1,804	1,860	1,856	1,839	1,926	IL	-40.4%	UK**	-0.4%	2010-2018
UK*(5)	544	513	546	510	409	370	384	357	349	327	320	339	269	243	253	216	230	233	187	NL	-39.0%	CH	-5.8%	
IL	542	525	445	467	437	405	382	412	314	352	341	263	277	279	322	335	321	276	323	BG*	-37.9%	IL	1.6%	2013-2019
NO	275	310	280	258	224	242	233	255	212	210	168	145	187	147	117	135	106	108	108	RO	-23.9%	NO	-7.5%	2010-2018
RS	1,275	854	868	960	843	911	968	905	809	660	731	688	650	536	599	607	579	548	534	MT	0.0%	RS	-2.9%	2010-2017
EU27	51,483	50,577	46,286	43,482	42,604	40,452	40,125	36,947	33,052	29,682	28,844	26,481	24,296	24,184	24,416	23,838	23,455	23,366	22,659	EU27	-56.0%	EU23	-2.7%	

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

*National provisional estimates used for 2019, as the final figures for 2019 were not yet available at the time of going to print.

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

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

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

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

(5) UK - 2019 estimate is based on GB provisional total for the year ending June 2019 (1870 deaths) and the provisional data for Northern Ireland for the calendar year 2019 (56 deaths).

Table 3 (Fig.7). Road deaths per million inhabitants in 2019 and 2010.

	2019				Deaths per mln inhabitants 2010		Deaths per mln inhabitants 2019
	Road deaths	Inhabitants	Deaths per mln inhabitants				
AT	416	8,858,775	47	AT	66	NO	20
BE*	620	11,455,519	54	BE*	78	SE	22
BG*	628	7,000,039	90	BG*	105	CH	22
CY	52	875,899	59	CY	73	IE*	29
CZ	617	10,649,800	58	CZ	77	UK	29
DE*	3,059	83,019,213	37	DE*	45	MT	32
DK	199	5,806,081	34	DK	46	DK	34
EE	52	1,324,820	39	EE	59	IL	35
ES*	1,724	46,937,060	37	ES*	53	LU	36
FI*	209	5,517,919	38	FI*	51	ES*	37
FR ⁽¹⁾	3,244	64,897,954	50	FR*	64	DE*	37
EL*	699	10,724,599	65	EL*	112	FI*	38
HR	297	4,076,246	73	HR	99	NL	38
HU	602	9,772,756	62	HU	74	EE	39
IE*	141	4,904,240	29	IE*	47	SK	45
IT*	3,130	60,359,546	52	IT*	70	AT	47
LU	22	613,894	36	LU	64	SI	49
LV	132	1,919,968	69	LV	103	FR	50
LT	184	2,794,184	66	LT	95	IT*	52
MT	16	493,559	32	MT	36	BE*	54
NL	661	17,282,163	38	NL	39	CZ	58
PL	2,909	37,972,812	77	PL	102	CY	59
PT* ⁽²⁾	614	9,779,826	63	PT*	89	HU	62
RO	1,864	19,414,458	96	RO	117	PT*	63
SE	221	10,230,185	22	SE	28	EL*	65
SI	102	2,080,908	49	SI	67	LT	66
SK	245	5,450,421	45	SK	65	LV	69
UK	1,926	66,647,112	29	UK	30	HR	73
CH	187	8,544,527	22	CH	42	RS*	76
IL	323	9,136,000	35	IL	46	PL	77
NO*	108	5,328,212	20	NO	43	BG*	90
RS* ⁽³⁾	534	6,982,604	76	RS*	90	RO	96
EU 27	22,659	444,212,844	51	EU 27	68	EU 27	51

* National provisional road death estimates used for 2019, as the final figures for 2019 were not yet available at the time of going to print.

⁽¹⁾ FR - continental population data.

⁽²⁾ PT - continental population data for 2018 as continental data for 2019 were not available at the time of going to print.

⁽³⁾ RS - provisional population for 2018 as data for 2019 were not available at time of going to print.

Table 4 (fig. 8 Deaths per billion km drive)

Average for the latest three years for which both the road deaths and the estimated data on distance travelled are available. 2016-2018 AT, DE, FR, IE, NL, GB, IL. 2015-2017 BE, PL, SI. *Provisional figures for road deaths in 2019. Data for GB is used instead of the UK as since 2014 data on distance travelled in Northern Ireland are not available.

EU20 - 20 EU Member States could provide comprehensive distance travelled data.

	3yr average deaths	3yr average distance	3yr average deaths per distance	Time period covered
AT	418	81,512	5.1	2016-2018
BE*	680	101,718	6.7	2015-2017
BG*			n/a	
CY			n/a	
CZ	512	56,240	9.1	2017-2019
DE*	3,219	756,600	4.3	2016-2018
DK	186	51,675	3.6	2017-2019
EE	56	11,222	5.0	2017-2019
ES*	1,787	230,577	7.7	2017-2019
FI*	229	50,349	4.5	2017-2019
FR*	3,391	603,967	5.6	2016-2018
EL*			n/a	
HR	315	26,147	12.0	2017-2019
HU			n/a	
IE*	159	48,098	3.3	2016-2018
IT*	3,281	544,069	6.0	2017-2019
LU			n/a	
LV	139	14,254	9.7	2017-2019
LT			n/a	
MT	18	2,353	7.5	2017-2019
NL	640	135,173	4.7	2016-2018
PL	2,932	230,092	12.7	2015-2017
PT*	630	71,377	8.8	2017-2019
RO			n/a	
SE	266	84,340	3.2	2017-2019
SI	118	18,532	6.4	2015-2017
SK	241	27,667	8.7	2017-2019
UK			n/a	
GB ⁽²⁾	1,790	524,700	3.4	2016-2018
CH	217	68,760	3.2	2017-2019
IL	311	59,340	5.2	2016-2018
NO	107	45,615	2.4	2017-2019
RS	554		n/a	
EU20	19,322	3,145,964	6.1	2017-2019

EU20 average: EU27 excluding BG, CY, EL, HU, LU, LT, and RO due to lack of data on vehicle distance travelled.

* National provisional estimates used for 2019, as the final figures for 2019 were not yet available at the time of going to print.

Data on km travelled are provided by PIN panellists. Member States are using different methods for estimating the numbers of distance travelled.

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

⁽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.

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
AT ⁽¹⁾ *	6,370	6,397	8,017	7,344	7,434	7,486	7,566	7,664	7,631	
AT MAIS3+	1,516	1,522	1,554	1,405	1,410	1,309	1,389			
BE*	5,606	5,739	4,736	4,581	4,484	4,181	4,095	3,762	3,636	n/a
BE MAIS3+					3,979					
BG	8,078	8,301	8,193	8,776	8,639	8,971	9,374	8,680	8,466	
BG MAIS3+	2,451	2,366	2,204	2,034	2,175	2,295	2,503	1,943	1,988	
CY*	586	561	551	407	467	377	406	388	348	340
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
CZ MAIS3+										
DE*	62,620	68,985	66,279	64,045	67,709	67,706	67,426	66,513	67,967	n/a
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*	n/a	n/a	476	501	455	449	469	475	460	
EE MAIS3+										
ES*	11,995	11,347	10,444	10,086	9,574	9,495	9,755	9,546	8,935	
ES MAIS3+	7,331	7,420	7,047	6,613	6,343	6,955				
FI ⁽²⁾	1,326	1,308	n/a	n/a						
FI MAIS3+					519	477	460	409	485	
FR*	30,393	29,679	27,142	25,966	26,635	26,595	27,187	27,732	n/a	n/a
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	636
EL MAIS3+										
HR	3,182	3,409	3,049	2,831	2,675	2,822	2,746	2,776	2,731	2,492
HR MAIS3+										
HU	5,671	5,152	4,921	5,369	5,331	5,575	5,539	5,627	5,496	
HU MAIS3+										
IE ⁽³⁾ *	561	472	474	508	758	826	965	981		
IE MAIS3+					343					
IT	n/a	n/a	n/a	n/a	n/a					
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	n/a
LU MAIS3+						69	69	43	55*	n/a
LV*	569	531	493	452	434	479	525	496	542	461
LV MAIS3+										
LT	n/a	n/a	n/a	n/a	n/a	142*	96	52	163	92
LT MAIS3+	n/a	n/a	n/a	n/a	128	142	66	124	163	92
MT	211	235	300	265	292	306	294	304	317	305
MT MAIS3+										
NL	19,100	19,700	19,500	18,800	20,700	21,300	21,400	20,800	21,700	
NL - MAIS3+	5,700	6,100	6,400	6,500	5,800	6,000	6,400	6,500	6,800	
PL	11,491	12,585	12,049	11,669	11,696	11,200	12,077	11,103	10,941	10,633
PL MAIS3+				1,859	2,263	n/a	n/a	n/a	n/a	n/a
PT*	2,475	2,265	1,941	1,946	2,010	2,148	1,999	2,117	1,995	2,180
PT MAIS3+	2,290	2,368	2,111	2,074	2,055	2,171	2,196	2,241		
RO	8,509	8,768	8,860	8,156	8,122	9,057	8,285	8,181	8,144	8,125
RO MAIS3+										
SE	4,662	4,518	4,450	4,826	4,889	4,313	4,472	4,371	4,160	3,850
SE MAIS3+	1,217	1,102	1,032	1,091	1,159	906	962	903	921	790
SI	880	919	848	708	826	926	850	851	821	814
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
SK MAIS3+										
UK*	23,552	23,947	23,834	22,377	23,517	22,855	24,929	25,609	26,241	
UK MAIS3+	4,683	4,949	5,160	5,236	5,741	6,092	6,547			
GB	22,660	23,122	23,039	21,657	22,807	22,144	24,101	24,831	25,511	
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
CH MAIS3+	n/a	3,428	3,262	3,204	2,899	2,887	2,929	3,127		
IL ⁽⁴⁾	1,683	1,340	1,611	1,913	1,880	2,058	2,273	2,164	2,042	2,220
IL MAIS3+				1,913	1,880	2,058	2,273	2,164	2,042	2,220
NO	714	679	639	640	674	682	656	665	602	565
NO MAIS3+										
RS	3,883	3,777	3,544	3,422	3,275	3,448	3,362	3,514	3,338	3,318
RS MAIS3+										

	Fig. 9 2010-2019	Time period
EL	-62.8%	
CY	-42.0%	
BE	-35.1%	2010-2018
CZ	-26.1%	
ES	-25.5%	2010-2018
HR	-21.7%	
NO	-20.9%	
LV	-19.0%	
CH	-18.4%	
SE	-17.4%	
RS	-14.6%	
PT	-11.9%	
DK	-11.7%	
FR	-8.8%	2010-2017
SI	-7.5%	
PL	-7.5%	
SK	-6.6%	2010-2017
AT	-4.8%	2012-2018
RO	-4.5%	
EE	-3.4%	2012-2018
HU	-3.1%	2010-2018
LU	2.6%	2010-2018
BG	4.8%	2010-2018
DE	8.5%	2010-2018
UK	11.4%	2010-2018
NL	13.6%	2010-2018
IL	16.0%	2013-2019
MT	44.5%	
EU 23*	2.0%	

	Fig.10 Annual average change in the number serious injuries over the period 2010-2019	
AT	-0.2%	2012-2018
BE	-5.5%	2010-2018
BG	1.0%	2010-2018
CY	-6.0%	
CZ	-3.5%	
DE	0.5%	2010-2018
DK	-2.1%	2010-2018
EE	-0.6%	2012-2018
ES	-3.1%	2010-2018
FI		Excluded from fig. 10
FR	-1.3%	2010-2017
EL	-10.8%	
HR	-2.5%	
HU	0.7%	2010-2018
IE		Excluded from fig. 10
IT		Excluded from fig. 10
LU	-1.9%	2010-2018
LV	-0.7%	
LT		Excluded from fig. 10
MT	3.6%	
NL	1.7%	2010-2018
PL	-1.2%	
PT	-0.9%	
RO	-0.7%	
SE	-1.6%	
SI	-0.5%	
SK	-1.1%	2010-2017
UK	1.2%	2010-2018
GB	1.3%	2010-2018
CH	-2.3%	
IL	2.4%	2013-2019
NO	-1.6%	
RS	-1.4%	
EU 23*	-0.4%	

* Similar national serious injury definition. EU23: EU27 excluding FI, IE, IT and LT due to insufficient data.

⁽¹⁾ AT - serious injury data collection methodology changed in 2012.

⁽²⁾ IE - serious injury data collection methodology changed in 2014.

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

Table 6. Current national definitions of seriously injured person in a road collision as used in Fig.10 and 11

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. Since 2017, serious injuries based on MAIS3+ is also estimated by the Ministry of Health.
CZ	Determined by the treating doctor, if serious health harm (specified approximately along the types by the law) occurs. Police records.
DE	Hospitalised for at least 24 hours. Police records.
DK	All injuries except "slight". Police records.
EE	Hospitalised for at least 24 hours. Hospital data is used to find out how long the person (involved in an accident according to the police data) was hospitalised.
ES	Hospitalised for at least 24 hours. Police records.
FI	Serious injury in official statistics is defined as MAIS3+ (AAAM, Association for the Advancement of Automotive Medicine). The number of seriously injured MAIS3+ is formed by combining the official road accident participant statistics maintained by Statistics Finland and the Hospital Discharge Register (HILMO), using personal identity numbers as the link. ICD-10 codes from hospital data are converted to MAIS.
FR	Until 2004: hospitalised for at least 6 days. From 2005: hospitalised for at least 24 hours. Police records. People injured are asked to go to the police to fill in information about the collision, in particular if they spent at least 24 hours as in-patient.
EL	Injury and injury severity are estimated by police officers. It is presumed that all persons who spent at least one night at the hospital are recorded as seriously injured persons. Police records.
HR	ICD-International Classification of Diseases- used by medical staff exclusively, after admission to the hospital
HU	Serious injury which necessitates hospitalisation for more than 48 hours within seven days after occurrence or caused fracture, except for finger, toe, nose fractures; or caused cut wounds, which resulted in serious bleeding or nerve, muscle or tendon injuries; or caused injury of inner organs; or caused burn of second or third degree or burn affecting more than 5% of body surface.
IE	Hospitalised for at least 24 hours as an in-patient, or any of the following injuries whether or not detained in hospital: fractures, concussion, internal injuries, crushing, severe cuts and lacerations, several general shock requiring medical treatment.
IT	Separate statistics on 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	Definition: "A serious road injury is a road crash casualty who has been admitted to hospital with a minimum MAIS (Maximum Abbreviated Injury Score) injury severity of at least 2 on a scale of 6, and who has not died within 30 days from the consequences of the crash." Method: MAIS=2 or higher. Linked Police-Hospital records + remainder file + estimate of unobserved C/R. MAIS3+ is a subset of MAIS2+; The MAIS2+ series is just appended with the new 2018 figure in the new methodology, as EVG numbers have been 'officially' set and are only replaced on special occasions.

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	Person seriously injured in traffic accident, person who has suffered: a) loss of a sense or organ or cessation of their operation; b) permanent physical or mental disability; c) a serious and permanent aesthetic wound; d) an abortion; e) fractures, except for nasal or zygomatic bone fractures, fingers, clavculus, monofocal fractures of 1-3 ribs or 1-3 tooth pulsations, if they did not require hospitalization for more than 24 hours; f) shock, concussion, internal injuries, crushing, severe cuts and tears or polytrauma that required hospitalization for more than 24 hours; g) abrasions, sprains, contusions or other such injuries that required hospitalization for more than two working days. Serious shock, or any other injury which leads to death more than 30 days after the collision. Police records.
SE	The definition of seriously injured was updated in 2007. A serious injury is now defined as a health loss following a traffic injury reflecting that a person does not recover 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	Hospitalised more than 24 hours as in-patient. Police records. Since 2018 - improved in accordance with MAIS3+ definitions
NO	Very serious injury: Any injury that is life-threatening or results in permanent impairment. Serious injury: Any injury from a list of specific injuries; these would normally require admission to hospital as an in-patient. Police records.
RS	Using of the ICD-International Classification of Diseases. Categorization of an injury as a "serious injury" is made on the basis of expert assessment given by doctors during admission to hospital, during hospitalization or after the hospitalization. The Republic of Serbia has not yet adopted a definition for serious injury. Police records.

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

AT	<p>The KfV carried out a feasibility study on MAIS3+ assessment on behalf of the Austrian Transport Ministry (bmvit) in 2014 and 2015. The study covered two methods to estimate the number of serious road injuries: a) application of a (hospital data based) correction factor to the police reported number of serious injuries, and b) use hospital data alone to arrive at an estimate for serious injuries.</p> <p>The latter method was selected for further use. In late 2015, the number of MAIS3+ injuries was estimated for the first time (at 1410) for the year 2014. For the same year, the number of fatalities was 430, resulting in a ratio of 3.28 between serious injuries and fatalities. The estimation was thereupon also carried out for 2010-2016.</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, it is unpredictable when the number will be calculated, because of the COVID19 crisis.</p>
CZ	<p>In 2021 a new accident form with MAIS3+ for police registration is planned.</p>
DE	<p>An MAIS3+ injured persons estimation based on GIDAS data, data from the German Trauma Register and data from the official accident statistics is being calculated by Bast.</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+ will be adopted for coding the level of injury and calculated on the basis of data sources such as the hospital discharge register. An estimate of the number of seriously injured has been calculated 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 2020). Is planning to start registered from 1st January, 2021.</p>
LT	<p>MAIS3+ data already available since 2014.</p>
MT	<p>MAIS3+ conversion process from ICD to MAIS3+ is still going. Anticipated to be completed near future.</p>
NL	<p>Data on MAIS3+ already available 1993-2018; at the moment, no further disaggregates of this data are available</p>

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	Under discussion.
SE	Data already available since 2007.
SI	We have made experimental linking between police and hospital data. MAIS3+ data are incomplete and not ready for publication and still under discussion.
SK	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	Adopted in official statistics. Estimates based on MAIS 3+ definitions were made since 2013.
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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