

HOW TRAFFIC LAW ENFORCEMENT CAN CONTRIBUTE TO SAFER ROADS

PIN Flash Report 42

March 2022



European Transport Safety Council

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About the European Transport Safety Council (ETSC)

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

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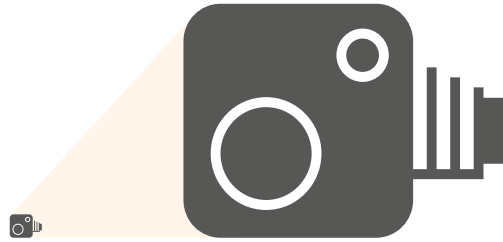
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ROAD SAFETY ENFORCEMENT IN EUROPE

THE NUMBER OF CAMERAS

IN THE COUNTRY WITH THE HIGHEST NUMBER OF CAMERAS PER MILLION POPULATION IS



100 TIMES HIGHER

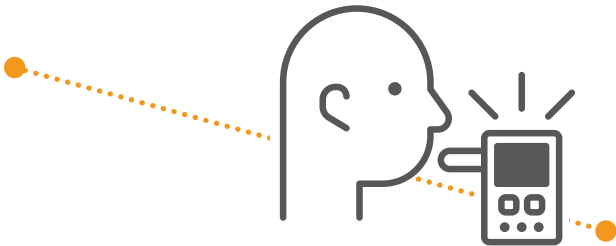
THAN THE COUNTRY WITH THE LOWEST NUMBER OF CAMERAS PER MILLION POPULATION

BETWEEN 2019 & 2020

THE NUMBER OF ALCOHOL TESTS

DECREASED

FOR ALL THE COUNTRIES THAT PROVIDED DATA

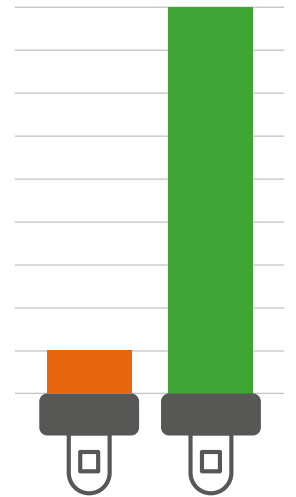


SEATBELT COMPLIANCE

IN REAR SEAT IN THE COUNTRY WITH THE HIGHEST COMPLIANCE IS

9 TIMES HIGHER

THAN IN THE COUNTRY WITH THE LOWEST COMPLIANCE



KEY RECOMMENDATIONS

COUNTRIES:

Set annual targets for numbers of checks and compliance



Channel revenue raised from fines back into road safety work



Set up a demerit point system

Run large-scale enforcement actions, coordinated with publicity campaigns



EU:



Revise the directive on cross-border enforcement to make sure fines are followed up



MAIN INDICATORS

This report aims to compare the levels of traffic law enforcement between Member States. It uses as its main indicators the annual number of speeding tickets (Table 1), roadside alcohol breath tests (Table 4), tickets for non-use of seatbelt (Table 5) and tickets for illegal use of a mobile phone (Table 6) per head of population. It also uses as indicators an annual change (in %) in the number (per 1000 population) of speeding tickets (Fig.1a), drink-driving checks (Fig.3a), tickets for non-use of seatbelt (Fig.7a) and tickets for illegal use of a mobile phone (Fig.8a).

The ideal indicator on how to assess the level of enforcement would be to compare countries on the basis of time spent on enforcement or checks performed both by the police and by safety camera. For instance, GoSafe, the service provider contracted by the Irish Police, has to provide a minimum of 7,400 enforcement hours and a maximum of 100 survey hours per month across the country.² Unfortunately this indicator is not available in most other countries other than for drink-driving. This report uses the number of tickets per 1000 inhabitants for speeding, non-use of seatbelt and illegal use of a mobile phone, assuming constant enforcement effort. Hence, an increase in the number of tickets in a country indicates an increase in enforcement activities. For drink-driving however, the report makes use of the number of roadside alcohol breath tests (not the number of tickets for drink-driving).

This report also includes the number of safety cameras per million inhabitants (Fig.2) and the proportion of speeding tickets that were generated by safety cameras (Table 1). Data on offences committed by non-residents are limited and available only in Austria, France, Hungary, Italy, Latvia, the Netherlands, Poland, Portugal, Slovakia and Spain (Table 7).

The data used in the report were provided by the PIN panellists and the police. No information was received from Malta. Data are not available nationwide for Italy, Spain and the UK. Available data were used for these countries. Population data were retrieved from the Eurostat database. The full dataset is available in the Annexes.

The analysis builds on previous country rankings on the levels of enforcement in **ETSC's PIN Report 31 How Traffic Law Enforcement can Contribute to Safer Roads**. Total number of deaths and serious injuries up to 2020 are available in ETSC's 15th (2021) PIN Annual Report. These publications can be downloaded from www.etsc.eu/pin.

2020 DATA AND COVID-19

2020 was the year in which the COVID-19 pandemic hit the world. The initial response to the pandemic was to severely restrict people's travel and this resulted in unprecedented reductions in traffic volumes in most PIN countries during 2020.

For this reason, this report does not include 2020 data in any trends but has instead included the relative change between 2019 and 2020 in a separate figure.

¹ An Garda Síochána, Ireland's National Police Service <https://bit.ly/3E55z7hfgd>

EXECUTIVE SUMMARY

Exceeding speed limits, drink- or distracted-driving, and failure to wear a seatbelt are among the important factors leading to death and serious injury on European roads.

Road safety laws have been adopted to guide drivers in their behaviour. Many comply with them willingly. Others, however, would be less likely to comply if it were not for fear of being detected and sanctioned. This is where traffic law enforcement comes in.

SPEED ENFORCEMENT

Speed has a direct influence on collision occurrence and the severity of a collision. The number of collisions and the severity of those collisions increases exponentially as driving speeds increase.

A combination of mobile roadside police checks together with automated enforcement, including mobile and fixed cameras, as well as time-over-distance cameras, has proved to be an effective tool in addressing speeding.

In a clear majority of PIN countries, the number of speeding offences detected continues to increase. Of the 28 countries that could provide data on the number of speeding tickets issued over the period 2010–2019, the number went up in 21 countries, while seven registered a decrease.

Of the PIN countries able to provide data on the annual number of speeding tickets per capita, the highest numbers of speeding tickets are issued in Luxembourg, the Netherlands and Belgium and, in recent years, Latvia. On the other hand, speeding tickets are issued relatively infrequently in Czechia, Greece and Sweden with fewer than 25 speeding tickets issued per 1000 population in 2019.

Driver liability, which requires the driver to be identified following an infraction, can make it difficult or even impossible to follow up enforcement. Of the PIN countries able to provide data for this report, 10 reported having driver liability and 9 owner liability. Seven PIN countries reported having a hybrid of the two systems. Powered two wheeler riders are not required to have a licence plate in front and, therefore, remain

unidentified by safety cameras that photograph from the front. Motorcycle riders can also avoid sanctions in countries applying driver rather than owner liability as the rider's face is covered by the helmet.

DRINK-DRIVING

It is estimated that a quarter of all road deaths are related to drink-driving.

Enforcement is essential for creating a perception amongst drivers that there is a significant risk of being caught and punished when drinking and driving. Understanding road user perceptions on the risk of being subjected to drink-driving enforcement is crucial to evaluating the effectiveness of police efforts.

On average, in 2018, 23% of European respondents to a survey thought that, on a typical journey, they would be likely to be checked for drink-driving by the police (compared to 18% in 2015).

Even though driver perception on the likelihood to be tested for alcohol has increased since 2015, the scale of enforcement activities in the EU remains largely insufficient.

Out of the 14 PIN countries able to provide data for this report, the number of alcohol roadside breath checks increased in six countries between 2010 and 2019 while it decreased in the remaining eight.

Among the PIN countries that were able to provide data on the number of roadside police drink-driving checks, Estonia was the most active in 2019 with 696 checks carried out per 1000 population followed by Poland with 444, Hungary with 279 and Austria and Slovenia with 204 and 203 respectively. Alcohol checks were relatively infrequent in Ireland (64 per 1000 population).

13 PIN countries do not collect data on the number of roadside alcohol checks, consequently it is difficult to monitor progress and objectively evaluate policies in those countries.

DRUG-DRIVING

Both illicit and licit drugs can disrupt the psychological state of the driver and impair their driving performance. Using multiple drugs simultaneously, or in conjunction with alcohol, increases the risk of a collision even further.

The primary general deterrent factor when it comes to drug-driving is the perceived risk of detection. However, an EU survey carried out in 2018 shows that amongst the general driving population, only 14% think that they are likely to be checked by the police for the use of illegal drugs. This compares to 23% for alcohol checks. It is crucial therefore that drug-driving enforcement is carried out properly and visibly in the future.

SEATBELT USE

Despite the legal obligation to wear a seatbelt across the EU27 and the mandatory seatbelt reminder (SBR) systems in all seat positions on new car models sold in the EU starting from September 2019, usage in cars in the EU is estimated to be only 93% for front seat occupants and 79% for rear seat passengers in countries that are monitoring wearing rates.

Of the PIN countries able to provide data, seatbelt wearing rates are highest in Estonia (99%), France, Poland, Germany and Sweden with 98% of occupants of the front seats belting up. Seatbelt wearing rates in front seats remain as low as 63% in Italy and 81% in Croatia. However, Croatia saw an increase in wearing rates in front seats of 20 percentage points between 2010 and 2020, while wearing rates in Italy decreased from 67% to 63%. Seatbelt wearing rates generally increased for all countries, with the majority having a wearing rate of above 90% in front seats.

Disparities between countries are more significant when it comes to wearing seatbelts in rear seats. In Germany 99% of rear seat passengers wear a seatbelt, whereas in Italy only 11% do. Wearing a seatbelt in rear seats is still exceptional in Croatia with 36% rear seat passengers belting up, and low in Hungary (58%). The biggest increases in the last ten years in rear seatbelt wearing rates



were recorded in Croatia, Slovenia, Austria, Estonia, Czechia and Denmark.

Countries could consider automated enforcement of seatbelt wearing. The Netherlands, Denmark and Spain already have automated enforcement of seatbelt wearing.

DISTRACTION

Distracted driving is a growing problem in road safety. Collision involvement risk rises with increased mobile phone use. Those driving and using mobile phones a lot are twice as likely to be involved in a collision than those making minimal use of mobile phones.

An ESRA survey in 2018 revealed that 48% of drivers reported making or answering a call with a hands-free device, 29% reported making or answering a call using a hand-held mobile phone, and 24% read a text message, email or checked social media while driving at least once in the last 30 days.

Of the 25 PIN countries that provided the number of tickets for illegal use of mobile phone over the period 2010–2019, 11 countries saw an increase and 14 countries saw a decrease.

In recent years, the use of in-vehicle infotainment systems has increased. Research has shown that systems such as Apple CarPlay and Android Auto, that display smartphone apps on in-car displays, impair reaction times behind the wheel more than alcohol and cannabis use. Moreover, controlling them via touch screen resulted in reaction times that were even worse than texting while driving.

CROSS-BORDER ENFORCEMENT

According to the European Commission, non-resident drivers account for approximately 5% of road traffic in the EU and a foreign-registered car is around three times more likely to commit a traffic offence than a domestically registered one.

The automated detection of a violation by safety cameras and automated identification of vehicles and owners are being used increasingly across the EU.

Only 10 EU Member States were able to provide data for this report on the number of automatically detected offences committed by non-residents. And it can be seen that the proportions of those followed up vary greatly from one country to another.

In Austria, Hungary, Latvia and Slovakia in 2020 all the offences were followed up with a letter sent to the owner of the vehicle but varying proportions of the penalties issued for those offences were eventually paid – 100% in Slovakia, 65% in Austria, 52% in Latvia and 45% in Hungary. On the other hand, 38% of offences committed by non-residents were followed up with a letter in Portugal in 2020 but a relatively high proportion of the penalties issued were paid (86%).

MAIN RECOMMENDATIONS TO NATIONAL GOVERNMENTS

- Collect, monitor and publish the enforcement effort (e.g. number of checks) and results (number of violations detected and sanctioned) over time by violation type in order to be able to evaluate progress against objectives in the enforcement plans.
- Set enforcement plans with yearly targets for numbers of checks and compliance with traffic laws, in particular addressing the priority areas of speeding, drink- and drug-driving, illegal use of mobile phone, red-light running, failing to wear seatbelts, child restraints or helmets. Share those enforcement plans with the European Commission to facilitate the exchange of best practice on enforcement across the EU.
- Run annual enforcement actions, coordinated with information activities.
- Participate in ROADPOL cross border enforcement actions.
- Set up a transparent system for the allocation of funds generated by fines and channel them from enforcement back into road safety work.
- Set up and implement a demerit point system which includes the offences with a direct relationship with collisions or collision severity such as speeding, drink/ drug-driving, non-use of seatbelts and distraction, as recommended by the EU-funded research project BESTPOINT.

MAIN RECOMMENDATIONS TO EU INSTITUTIONS

Within the context of the revision of Directive 2015/413 concerning cross-border exchange of information on road safety related traffic offences:

- Revise the Directive to strengthen the enforcement chain, including mandatory notification by the country of offence of the owner of the vehicle.
- In case of non-payment of cross-border fines, encourage member states to apply the Council Framework decision 2005/214 on the principle of mutual recognition of financial penalties.

- Recast the Framework Decision 2005/214 to include civil/administrative offences as this would provide an important final part in the enforcement chain.
- Publish best practice guidelines on enforcement and sanctions in the field of road safety and thereby encourage Member States to achieve high standards on enforcement methods and practice and a greater convergence of road-safety related traffic rules building on the EC Recommendation on Enforcement in the field of Road Safety. Promote sanctions that are effective, proportionate and dissuasive.
- Develop common minimum standards on enforcement equipment.
- Collect, analyse and publish summaries of EU countries' enforcement plans to facilitate the exchange of best practice on enforcement across the EU and work towards developing a common road safety enforcement strategy.
- Adopt a new EU Key Performance Indicator on the enforcement effort (e.g. number of checks) and results (number of violations detected and sanctioned) over time by violation in priority areas such as speeding, drink- and drug-driving, seatbelt and child restraint, etc.

Following the adoption of Regulation 2019/2144 concerning Type-Approval Requirements for the General Safety of Motor Vehicles:

- Extend the mandatory fitment of advanced seatbelt reminders as standard equipment to all seats.
- As a first step towards wider use of alcohol interlocks, legislate their use by professional drivers and as part of rehabilitation programmes for recidivists and high-level first-time offenders.
- Consider the feasibility, acceptability and possible implications for road safety of next-generation Intelligent Speed Assistance for cars, vans, trucks and buses as requested by the European Parliament in its report.²

² EP report 2021/2014 on the EU Road Safety Policy Framework 2021-2030 – Recommendations on next steps towards 'Vision Zero', <https://bit.ly/3G7ZGrc>

INTRODUCTION: THE ROLE OF ENFORCEMENT

Exceeding speed limits, drink- or distracted-driving, and failure to wear a seatbelt are still the leading causes of death and serious injury on European roads. Despite legislation designed to prevent all four, many drivers involved in fatal collisions clearly failed to comply with one or more road traffic laws at the time of their collision.

Roads should be designed in such a way that safe behaviour is the intuitive behaviour; speed limits should be set at levels so that driving within the speed limit is comfortable and an easy choice to make; and in-vehicle technologies such as seatbelt reminders, alcohol interlocks and Intelligent Speed Assistance can also improve adherence to traffic laws. According to the Safe System approach, traffic law enforcement is an essential component in preventing death and injury and should accompany the aforementioned measures.

Enforcement of road traffic laws is an essential component in preventing death and injury.

Road safety laws have been adopted to guide drivers in their behaviour. Many comply with them willingly. Others, however, would be less likely to comply if it were not for fear of being detected and sanctioned. This is where traffic law enforcement comes in.

Sustained intensive traffic law enforcement that is well explained and publicised also has a long-lasting effect on driver behaviour. Traffic law enforcement is a very cost-effective means of enhancing road safety and forms a fundamental part of achieving the EU 2030 road safety targets. The benefits of applying existing best practice to the whole of the EU exceed the costs by a factor of four in the case of drink-driving and ten in the case of seatbelt use.³

Traffic law enforcement is based on giving drivers and riders the feeling that they are likely to be detected and sanctioned when breaking the rules. Efficient enforcement strategies are, therefore, not about increasing the level of fines, but about increasing the chance of being detected as perceived by the drivers.⁴

Traffic law enforcement is based on giving drivers and riders the feeling that they are likely to be detected and sanctioned when breaking the rules.

The frequency and location of police checks determines the objective chance of being detected. Based on what they know about the objective chance and what they read in newspapers or hear from friends or colleagues, drivers estimate their own chance of being detected for a traffic offence (the 'subjective' chance).⁵ When drivers perceive this chance as being sufficiently high, they will avoid committing traffic offences.⁶

³ ETSC (2007), Traffic Law Enforcement Across the EU – Time for a Directive, <http://goo.gl/PQkZY6>

⁴ ETSC (2011), Traffic Law enforcement, Tackling the Three Main Killers on Europe's Roads <https://bit.ly/33W5eY6>

⁵ Van Schagen I, Machata, K. (2010), Handbook of Best Practice Measures in Road Safety, SUPREME, EU funded project, <https://bit.ly/3fEfQ0C>

⁶ ESCAPE (2001) in PACTS Roads policing and its contribution to road safety (2020) <https://bit.ly/35Fsh8C>; Hughes, M., Kelly, E. & Sjørup, J. (2019) 'Raising the Game Enforcement Strategy', Road Safety Support, <https://bit.ly/3LkKQBg>; Job, RFS., Sakashita, S., Mooren, I., Grzebieta, R. (2013) Community Perceptions and Beliefs Regarding Low level Speeding and Suggested Solutions. Proceedings of the TRB Annual Meeting, Washington DC, <https://bit.ly/3sygidh>; PEPPER (2008) in PACTS (2020) Roads policing and its contribution to road safety, <https://bit.ly/35Fsh8C>; SWOV Fact Sheet (2009) Speed cameras: how they work and what effect they have, <http://goo.gl/PYtqd0>; PACTS (2020) Roads policing and its contribution to road safety <https://bit.ly/35Fsh8C>

The effectiveness of enforcement is better if police controls:

- are accompanied by sufficient publicity;
- take place persistently over a long period;
- are unpredictable and difficult to avoid;
- combine highly visible and less visible activities;
- focus on traffic offences that have a direct, proven relationship with collisions or their severity (e.g. speeding, drink- and drug-driving, failure to wear a seatbelt, red-light running, close following, mobile phone use...);
- take place at locations and at times where violations are observed, or can from evidence elsewhere be expected to have the most effect on safety;⁷
- are followed by a sanction that is effective, proportionate and dissuasive (e.g. financial penalty, retraining course, alcohol interlock-based drink driver rehabilitation programmes).

Improvements in traffic law enforcement should be part of an integrated road safety policy and have been shown to lead to rapid reductions in deaths and injuries when implemented in line with best practice.

Citizen support for enforcement is high. In an EU survey carried out in 2018, over 70% of respondents said traffic rules and penalties should be stricter for drink-driving and only 21% felt they were too severe. Percentages were similar for sanctions related to driving while on a mobile phone. 68% of the respondents felt that traffic rules for speeding were not being sufficiently enforced.⁸

However, in most countries, the scarce resources allocated for enforcement are not always used optimally. Much of the knowledge and good practice in place in the best performing and fastest progressing countries has yet to be translated in other PIN countries⁹ into long-term strategies that effectively change road user behaviour, reduce the risk of collision or reduce injury severity.

The systems in place to follow up a traffic offence are also crucial. The existing EC Recommendation on Enforcement stresses that the follow-up of detected offences should be 'effective, proportionate and dissuasive'.¹⁰

Research has found that long-term behavioural effects from enforcement are only achieved if the detection of a violation is followed by immediate feedback or a sanction.¹¹ In Sweden, for example, fines from safety cameras reach the driver within a week in order to connect the fee with the speeding. To make immediate feedback or a sanction possible for speeding, 'low-level' offences detected by cameras should be followed up by simplified procedures. In these procedures, detection, prosecution and sanctioning are essentially combined into one stage and a small range of fixed sanctions apply. In cases of very serious speeding offences or repeated offences, the application of penal law is of course still possible. The robustness of the system should be improved to reduce appeals against fixed penalties for speeding violations.

⁷ SafetyNet (2009), Speeding (retrieved May 2016), <https://bit.ly/3InpmkR>

⁸ Goldenbeld, C., & Buttler, I. (2021) Enforcement and traffic violations. ESRA2 Thematic report Nr. 6. ESRA project (E-Survey of Road users' Attitudes) <https://bit.ly/32eDZHF>

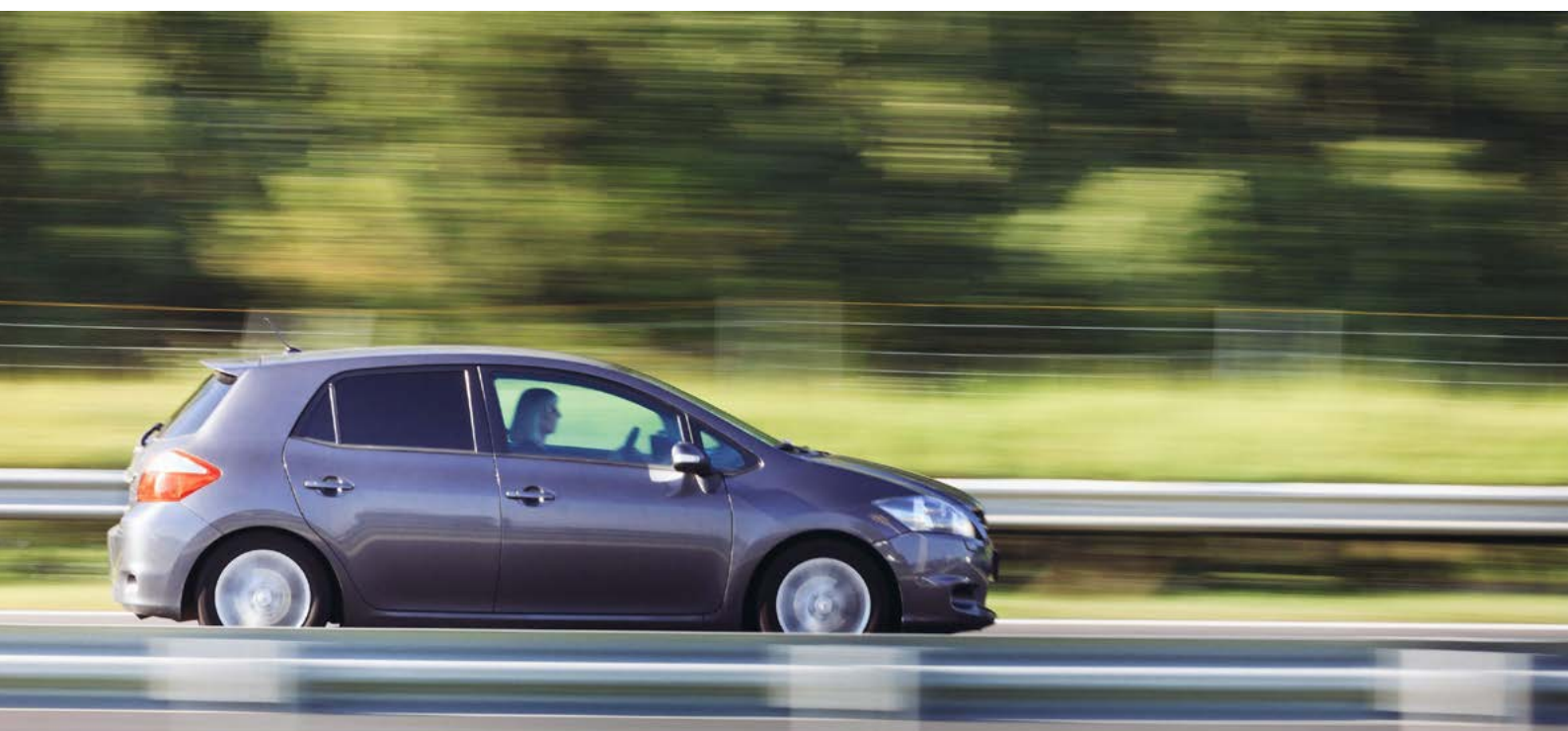
⁹ 32 countries including all 27 EU member states, Israel, Norway, Serbia, Switzerland and the UK.

¹⁰ EC Recommendation 2004/345 on Enforcement in the Field of Road Safety <https://bit.ly/2H06SMX>

¹¹ ESCAPE (2001) in PACTS (2020) Roads policing and its contribution to road safety <https://bit.ly/35Fsh8C>

It is important that the level of sanctions is proportionate to the risk related to non-compliance. However, research has found that the level of sanctions has less of an impact on safety than the level of enforcement. A world-wide meta-analysis of demerit points systems carried out in 2012 concluded that they can have a positive impact on reducing the number of traffic violations as well as the numbers of collision, injuries and deaths. However, in order to ensure longer lasting safety effects, enforcement levels must remain high and be sustained over a long period of time.

Under the EU Recommendation adopted in 2004, EU countries were advised to set up national enforcement plans containing a strategy on enforcement activities in at least three areas of non-compliance – speeding, drink-driving and failure to wear a seatbelt. However, to ETSC's knowledge, only Croatia, Cyprus, Denmark, Estonia, Finland, Hungary and Luxembourg have a national enforcement strategy in place. In some countries, such as Italy, enforcement strategies can be developed either at the national level, i.e. by road police, or at the provincial or local level.



ENFORCEMENT IN THE EU ROAD SAFETY STRATEGY

In 2019, the European Commission published a new Strategic Action Plan on Road Safety that includes a new long-term target to halve road deaths by 2030 as well as, for the first time, a target to reduce serious injuries by the same amount. Building political commitment and leadership at the highest level are prerequisites for preventing road traffic deaths and serious injuries. At the core of the proposals in the Sustainable and Smart Mobility Strategy (2020) is the target of a 50% cut in road deaths and serious injuries by 2030, with Vision Zero the aim for 2050.

Enforcement is part of the Vision Zero philosophy and the Safe System approach as set out in the EU Road Safety Strategy: 'The core elements are ensuring safe vehicles, safe infrastructure, safe road use (speed, sober driving, wearing safety belts and helmets) and better post-crash care'. A part of the 'shared responsibility' in reaching road safety goals included in the EU Road Safety Strategy and Safe System approach is that law enforcement officers and the justice system need to work together to increase compliance with road safety law. Updated rules on cross-border enforcement of traffic offences and a possible legislative initiative on the mutual recognition of driving disqualifications are among a major package of new legislative measures for the transport sector due for 2022.

PART I

**SPEED
ENFORCEMENT**



01

Speed has a direct influence on collision occurrence and the severity of a collision. The number of collisions and the severity of those collisions increase exponentially as driving speeds increase.¹⁷ Likewise, reducing speeds by only a few km/h can significantly reduce the number and severity of collisions.¹⁸ ETSC estimated that 2,100 lives could be saved each year if the average speed dropped by only 1 km/h on all roads across the EU.¹⁹

And yet speeding remains a problem on the roads. Exceeding the speed limit is by far the most recorded road traffic offence.

Exceeding the speed limit is by far the most recorded road traffic offence.

Speed enforcement aims to dissuade drivers from exceeding the speed limit by penalising those that do. This not only affects the speed of drivers who feel typified by those that actually get caught (specific deterrence), but also those who see or hear that drivers keep being caught (general deterrence). Speed enforcement will remain essential until the speed problem is solved in a structural way by road design, engineering measures and in-vehicle technology as prescribed in the Safe System approach.²⁰

Speed enforcement is most effective when it is unpredictable and hard to avoid, and when it is maintained over a long period of time. Speed enforcement should not be a standalone measure but should be accompanied by measures such as credible speed limits, self-enforcing infrastructure, publicity and technologies.²¹ Speed limit selection is a critical indicator determining safe travel speeds for different road types. Which speed is considered safe depends on the road design and its function, traffic volume, the composition of traffic and potential conflict types.²²

A combination of mobile roadside police checks together with automated enforcement, including mobile and fixed cameras, as well as time-over-distance cameras, has proved to be an effective tool in addressing speeding.²³ To take account of the maximum distance halo of a speed camera (the distance over which it has an effect) and to be most effective in reducing speeding and thus speed related collisions, research concludes that deployment of fixed and mobile speed cameras should be within a maximum range of one kilometre from locations that have a history of collision risk related to speeding.²⁴ For cameras set in a series, such as can be found in Sweden, research shows that the influence can extend to around 5km.²⁵ By their nature, time-over-distance cameras can be effective over much greater lengths of road.

Efficiency is further enhanced if the handling of fines for detected violations is rapid, thus largely automated. The best estimate is that automatic speed enforcement results in collision reduction of 15% to 20%.²⁶ The efficiency of automatic enforcement is higher if the vehicle owner or keeper²⁷ and not the vehicle driver is held liable, since it is easier and faster to identify the owner/keeper than the driver.

Speed enforcement is most appropriate on specific road stretches where severe collisions are concentrated and where there are high levels of non-compliance with the speed limits. Such targeted action brings road safety benefits to the most dangerous road sections and makes it easier to explain the reasons for enforcement to the general public. That having been said, enforcement should not be limited to one road category. It is important that drivers are aware that surveillance may take place anywhere, especially on roads with high traffic volumes, making enforcement visible for many road users.

¹⁷ OECD/ITF (2018) Speed and Crash Risk, <https://bit.ly/3bVp2M6>

¹⁸ For more information read an analysis by Henk Stipdonk "The mathematical relation between crash risk and speed; a summary of findings based on scientific literature" which is available at www.etsc.eu/pinflash36

¹⁹ ETSC (2019), PIN Flash 36, Reducing Speeding in Europe <https://bit.ly/2YZgSzr>

²⁰ European Commission, Speed limits, <https://bit.ly/3FQ7TzQ> Cited in EC Speed Recommendation Input Paper (2020), <https://bit.ly/3GB73s9>

²¹ DaCoTA (2012) Speed Enforcement, Deliverable 4.8t of the EC FP7 project DaCoTA, <https://bit.ly/32i7pou>

²² ETSC (2019) PIN Flash 36, Reducing Speeding in Europe, <https://bit.ly/2YZgSzr>

²³ SWOV (2014) Speed cameras: how they work and what effect they have, <https://bit.ly/3FMwd5F>

²⁴ DaCoTA (2012) Speed Enforcement, Deliverable 4.8 of the EC FP7 project DaCoTA <https://bit.ly/32i7pou>

²⁵ Vadeby, A., Howard, C. (2022) Speed Cameras in Sweden. Effects on Speed and Traffic Safety, VTI Report 1107 (In Swedish with summary in English) <https://bit.ly/3GxAjp5>

²⁶ Elvik, R. & Vaa, T. (2004) The Handbook of Road Safety Measures <https://bit.ly/3GM4e85>

²⁷ In the UK a distinction is made between a vehicle owner and keeper. The registered keeper is the driver who is responsible for taxing, insuring and maintaining the vehicle. The vehicle owner is the one who has bought the vehicle or received it as a gift. It is the keeper that is liable to pay any penalties.

Enforcement must also be perceived as a necessary road safety measure, not a fund raising activity.²⁸ For example, in France, the funds resulting from traffic fines are reinvested in road safety measures including infrastructure road safety improvements, investments in hospitals dealing with rehabilitation after a road traffic accident, road safety research, and investment and maintenance of equipment for traffic violations.

In a survey carried out in 2018, only 37% of respondents on average in the EU replied that they felt they were likely to be checked by the police for speeding. More than 50% of respondents felt they were likely to be checked by the police for speeding in Serbia and Poland whereas less than 30% of respondents in Sweden Denmark and the UK felt a check was likely.²⁹

1.1 SPEED ENFORCEMENT

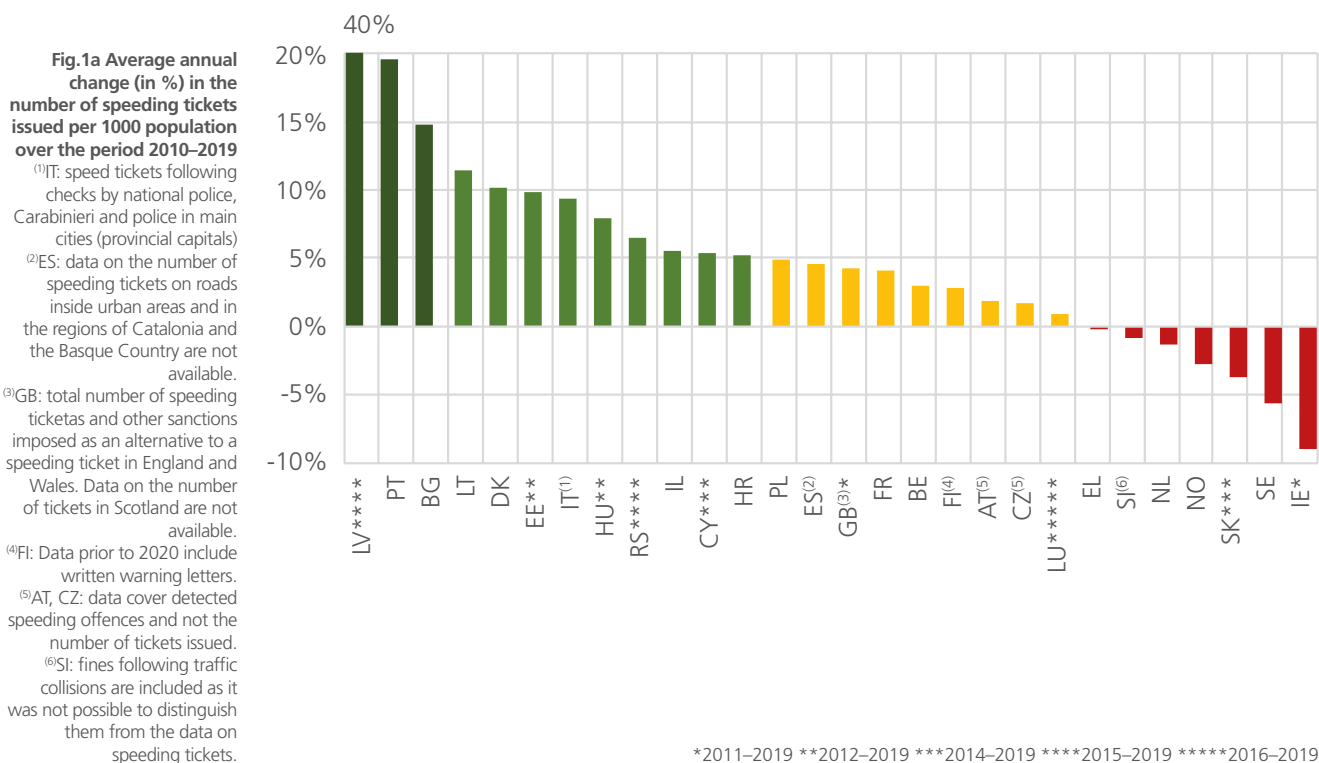
In this report it is assumed that an increase in the number of speeding tickets in a country indicates an increase in enforcement activities (see indicator box).

In a clear majority of PIN countries, the number of speeding offences detected continues to increase.

Of the 28 countries that could provide data on the number of speeding tickets issued over the period 2010–2019 per 1000 population, the number went up in 21 countries, while seven registered a decrease.

Between 2010 and 2019, the number of speeding tickets issued per 1000 population has increased annually on average in Portugal by 20% and in Bulgaria by 15%. Data for Latvia are only available from 2015, but here too there has been a significant increase in the number of speeding tickets issued per 1000 population, from 68 in 2015 to 243 in 2019 (Fig. 1a).

Conversely, in Sweden, the number of speeding tickets issued per 1000 population has decreased annually on average by 6% between 2010 and 2019. Between 2011 and 2019, the number of speeding tickets issued per 1000 population has decreased annually in Ireland by 9%.



²⁸ Tang, Cheng Keat (2017) Do speed cameras save lives? SERC Discussion Papers (SERCDP221). Spatial Economics Research Centre, London School of Economics and Political Science, London, UK.

²⁹ Goldenbeld, C. & Buttler, I. (2021) Enforcement and traffic violations. ESRA2 Thematic report Nr. 6. ESRA project (E-Survey of Road users' Attitudes) <https://bit.ly/32eDZHF>



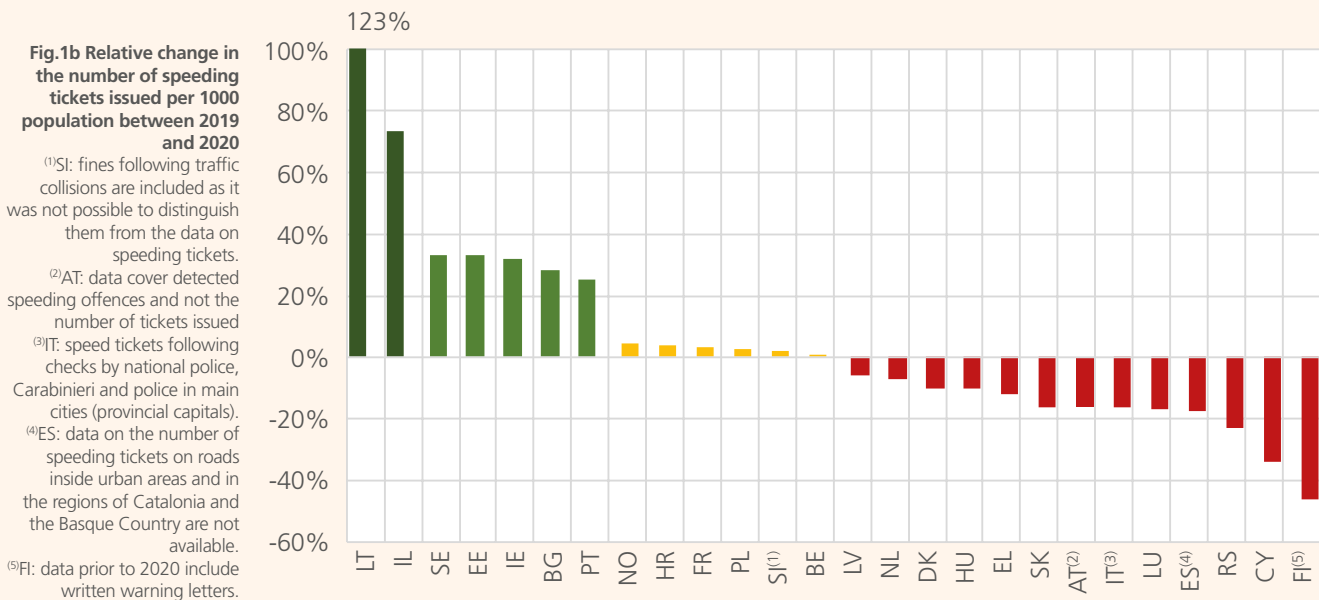
“The number of speeding tickets increased in Portugal between 2010 and 2019 by 20%. This increase can be attributed to improvements in automatic enforcement systems. Safety cameras were first installed in 2003 in the North of Portugal and in 2006 in Lisbon. SINCRO, the ANSR -run automatic speed enforcement system, also started in 2017.”

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

2020 DATA AND COVID-19

Lithuania and Israel saw large increases in the number of speeding tickets issued per 1000 population between 2019 and 2020 of 123% and 73% respectively. Sweden, Estonia and Ireland also saw above average increases in the number of speeding tickets.

In Finland on the other hand, the number of speeding tickets decreased by close to 50%, whereas the trend in previous years was an increase. (Fig.1b)



LITHUANIA

Lithuania saw a dramatic increase in the number of speeding tickets issued between 2019 and 2020. In 2019, Lithuania took the decision to intensify speed controls on its state roads. An additional 180 speed control devices operating continuously were installed. In addition, the tolerance margin was also reduced.

SWEDEN

In Sweden the number of tickets issued after a police check increased by over 60% between 2019 and 2020. Random breath testing for alcohol was stopped between March and October 2020 due to the pandemic. This gave the police more time to spend on speed enforcement, and they did. There is an ambition in Sweden to increase speed enforcement so it is hoped these levels will be sustained.

CYPRUS

In Cyprus the number of speeding tickets issued fell by over 30% between 2019 and 2020. This can partly be attributed to restrictions of movement imposed because of the COVID-19 pandemic but there were also technical problems with the only two speed cameras, which were installed on an urban dual carriageway road in Nicosia.

FINLAND

In Finland the number of speeding tickets issued fell by almost 50% between 2019 and 2020. However, in June 2020 there were significant changes in the reporting of these statistics with some elements no longer being included, so this must be taken into account.

1.2 SPEED ENFORCEMENT LEVELS BY COUNTRY

The methods and levels of speed enforcement differ greatly between PIN countries (Table 1). In 2019 for example, the number of speeding tickets issued per 1000 population in Luxembourg was 28 times higher than in Sweden, 480 versus 17.

Of the PIN countries able to provide data on the annual number of speeding tickets per capita, the highest numbers of speeding tickets are issued in Austria, Luxembourg, the Netherlands and Belgium and, in recent years, Latvia (Table 1.).

On the other hand, speeding tickets are issued relatively infrequently in Czechia, Greece and Sweden with fewer than 25 speeding tickets issued per 1000 population in 2019.

The role of safety cameras in speed enforcement also varies across the PIN countries. In 2019 in Bulgaria and Czechia, 100% of the speeding tickets were issued following detection by a speed camera, 99% in the Netherlands. France, Denmark, Great Britain, Luxembourg and Spain all have proportions over 90%. On the other hand, in Cyprus and Slovakia in 2019, fewer than 10% of speeding tickets were issued after detection by a speed camera.

Levels of speed compliance depend on many factors. Credible speed limits, that is to say a speed limit which appears logical to (the majority of) drivers, can improve speed compliance levels. In its EU Road Safety Strategy the European Commission sets proposals for 'safe roads and roadsides' within the Safe System approach which means that 'road engineering involves matching road function, design, layout and speed limits to accommodate human error in a way that road collisions do not lead to death and serious injury'. The European Commission plans to set up an expert group to develop a framework for road classification that better matches speed limit to road design and layout in line with the Safe System approach.

30KM/H IN CITIES

In recent years, many European cities have moved towards a 30km/h speed limit in urban areas (Copenhagen, Oslo, Berlin, Zurich, Vienna, Graz, Grenoble, Paris, Nantes, Bilbao...) and in all cases the new measure has been a success in terms of road safety.

BRUSSELS

In January 2021, the Brussels capital region introduced a new default 30km/h speed limit on almost all roads. With the introduction of this new measure, Brussels became the largest city in Europe to adopt a 30km/h speed limit, based on city surface area, population and population density.

Brussels has found that the average speed has decreased in the city by on average 12% between 2020 and 2021. The proportion of drivers exceeding the speed limit has also reduced from 10% in 2020 to 8% in 2021. A decrease in road deaths and serious injuries has also been observed. In the first 11 months of 2020, 11 people died on the roads in Brussels and 121 were seriously injured. In the first 11 months of 2021, 5 people died and 100 were seriously injured.

In order to enforce the new speed limit, Bruxelles Mobilité is planning to install 40 new fixed cameras (that can be used on 60 different new poles/places) as well as at least four time-over-distance cameras. In addition, more than 100 'preventative' cameras (showing the speed the vehicle is going at) will also be installed.

³¹ European Road Safety Observatory (2006) Speeding, <https://bit.ly/3qNyyJz>

³² European Commission (2019) EU Road Safety Policy Framework 2021–2030 -Next steps towards "Vision Zero" <https://bit.ly/349RyJh>

Table 1. Total number of speeding tickets per 1000 inhabitants (by both police roadside checks and safety cameras) and the proportion (in %) of those that were sent after an offence was detected by a safety camera. Ranked by number of tickets in 2020, from highest to lowest.

⁽¹⁾AT, CZ: data cover detected speeding offences and not the number of tickets issued

⁽²⁾FI: data prior to 2020 include written warning letters.

⁽³⁾SI: fines following traffic collisions are included as it was not possible to distinguish them from the data on speeding tickets.

⁽⁴⁾ES: data on the number of speeding tickets on roads inside urban areas and in the regions of Catalonia and the Basque Country are not available.

⁽⁵⁾IT: speed tickets following checks by national police only

⁽⁶⁾IT: speed tickets following checks by national police, Carabinieri and police in main cities (provincial capitals)

⁽⁷⁾GB: total number of speeding tickets and other sanctions imposed as an alternative to a speeding ticket in England and Wales. Data on the number of tickets in Scotland is not available.

	Yearly speed tickets per 1000 population													
	2020		2019		2018		2017		2016		2015		2010	
	Number of speed tickets	% by speed camera	Number of speed tickets	% by speed camera	Number of speed tickets	% by speed camera	Number of speed tickets	% by speed camera	Number of speed tickets	% by speed camera	Number of speed tickets	% by speed camera	Number of speed tickets	% by speed camera
AT ⁽¹⁾	560	n/a	671	n/a	603	n/a	593	87%	595	87%	578	86%	498	83%
LU	392	95%	480	96%	439	95%	428	95%	470	94%	n/a			
NL	366	99%	395	99%	452	99%	457	99%	470	99%	393	100%	501	98%
BE	352	n/a	354	n/a	330	n/a	300	n/a	293	n/a	288	n/a	246	n/a
LV	230	82%	243	83%	221	83%	167	72%	99	50%	68	31%	n/a	
FR	205	94%	199	94%	222	95%	269	95%	253	95%	212	94%	155	89%
EE	182	83%	137	74%	109	76%	109	78%	118	73%	107	71%	n/a	
BG	144	100%	111	100%	79	100%	54	100%	47	100%	33	90%	34	n/a
LT	140	n/a	63	n/a	96	n/a	77	n/a	43	n/a	50	98%	38	99%
DK	80	94%	89	96%	94	97%	104	97%	96	95%	79	92%	49	87%
CY	77	0%	118	4%	125	5%	120	6%	123	9%	108	29%	n/a	
PT	74	93%	59	89%	57	88%	55	86%	33	78%	32	71%	9	30%
HR	73	n/a	70	n/a	69	n/a	71	n/a	77	n/a	66	n/a	48	n/a
PL	69	24%	68	27%	51	22%	55	18%	54	19%	50	17%	n/a	
HU	68	87%	76	87%	68	91%	51	92%	28	93%	25	93%	n/a	
FI ⁽²⁾	56	77%	104	89%	122	90%	113	89%	113	87%	92	81%	99	75%
SI ⁽³⁾	53	n/a	52	n/a	42	n/a	54	n/a	35	n/a	44	n/a	61	n/a
IL	52	72%	31	48%	23	43%	42	77%	18	67%	17	73%	26	17%
SK	46	15%	55	8%	45	3%	44	3%	48	2%	55	1%	n/a	
CZ ⁽¹⁾	41	69%	23	100%	29	100%	16	100%	18	100%	18	100%	19	100%
RS	38	n/a	50	n/a	50	n/a	52	n/a	47	n/a	38	n/a		
IE	37	61%	28	55%	28	59%	31	70%	36	79%	47	81%	35	66%
NO	35	37%	34	41%	34	43%	33	52%	35	50%	33	52%	44	60%
DE	34	n/a												
SE	22	37%	17	48%	15	54%	14	51%	15	51%	17	50%	24	24%
EL	19	n/a	22	n/a	20	n/a	19	n/a	16	n/a	16	n/a	24	n/a
RO	n/a												47	3%
MT	n/a												103	n/a
Countries where data are available for part of the road network only														
ES ⁽⁴⁾	65	94%	79	91%	70	90%	78	92%	79	91%	89	91%	57	82%
IT ⁽⁵⁾	8	80%	10	79%	7	73%	14	87%	15	89%	13	88%	15	87%
IT ⁽⁶⁾	37	n/a	44	n/a	43	n/a	49	n/a	46	n/a	44	n/a	25	n/a
GB ⁽⁷⁾	n/a		38	97%	36	97%	34	96%	34	95%	30	94%	n/a	
Countries where data are available for part of the road network only														
CH	n/a													

1.3 AUTOMATED ENFORCEMENT

Automated enforcement can take a number of forms. Fixed cameras (in fixed locations) can continually monitor traffic speeds without a human operator if digitally connected to an electronic system. Time-over-distance systems measure the average speed over a road section to determine whether a violation has occurred. Mobile camera systems can be deployed in marked or unmarked units. Some countries move cameras between boxes or switch off cameras at certain times but drivers may be unaware which ones are operational.

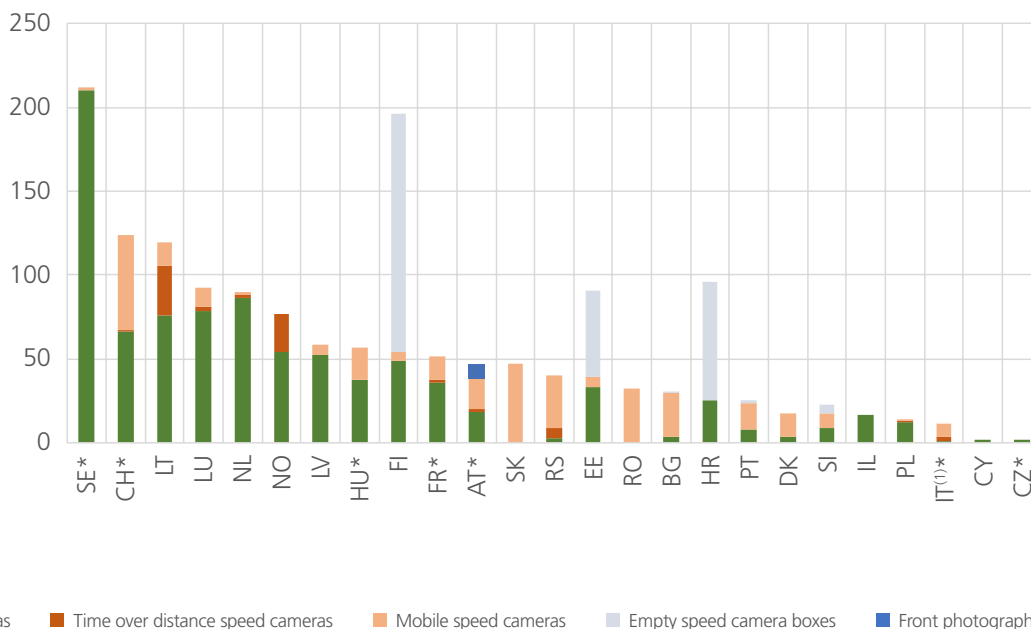
Research into the effects of speed cameras consistently shows positive results. An international review of studies reported that speed cameras produce a reduction of approximately 20% in personal injury collisions on road sections where cameras are used.

Fig.2 shows that not only the numbers of safety cameras but also the mix of fixed speed cameras, time over distance systems, mobile speed devices and empty camera boxes varies across the PIN countries. Of the PIN countries that were able to provide data, Sweden has the highest number of speed cameras per population with 212 per million inhabitants. Sweden also has the highest number of fixed speed cameras per inhabitant at 211 per million. Lithuania has the highest number of time-over-distance cameras per population at 29 per million and Switzerland has the highest number of mobile cameras per population at 56 per million. Finland is notable in the high numbers of empty camera boxes it has at 141 per million population, compared to 41 per million fixed speed cameras.

Research into the effects of speed cameras consistently shows positive results

Fig. 2 Number of safety cameras per million inhabitants in 2021 ranked by the number of fixed, mobile and time-over-distance cameras taken together

No strict definition of 'mobile' or 'fixed' camera was provided so data may vary between countries. In Switzerland for example, 'mobile cameras' also include cameras in moving police cars as well as moveable cameras.
⁽¹⁾IT: the number of speed cameras refers only to those managed by National Police.
 *2020



Most of the PIN countries able to provide data on numbers of speed cameras have seen an overall increase in the numbers of speed cameras since 2010. In Hungary for example the number of fixed speed cameras has increased significantly since 2010, from 7 to 365. In Latvia since 2015, the number of fixed speed cameras has also increased significantly from 16 to 100 and in Croatia from 21 to 104. On the other hand, fixed speed cameras numbers reduced by around 30% in Italy (from 81 to 56) over the same period (although the number of mobile speed cameras increased by 135% from 193 to 454). Time-over-distance cameras are still relatively new and of the PIN countries able to provide data for this report, only 10 reported having any in 2020 or 2021 (AT, CH, FR, IT, LU, LT, NL, PL, RS, NO) (Fig.2). Norway has seen the biggest increase in the number of time-over-distance cameras, going from 24 to 123 between 2015 and 2021.

Safety camera density (cameras per million inhabitants) is only one indicator of the level of speed enforcement and has limitations. The use of cameras to enforce speed limits is difficult to compare across countries because there is no common minimum standard specification for them or the trigger speed above the speed limit at which they will operate. Some countries have a high density of cameras but the times of operation are low. Other countries may have fewer cameras but operate them for longer periods. The number of tickets issued per camera varies due to the factors described above but also the effectiveness of related publicity and education campaigns and the efficiency of the ticket issuing offices differ between countries.

CANARD – USING EU FUNDS IN POLAND TO ESTABLISH AN AUTOMATIC SPEED ENFORCEMENT NETWORK



Since 2011, Poland has improved its automatic speed enforcement network³⁷ thanks to an EU co-founded project, called 'Construction of the central automatic road supervision system' (CANARD). The first phase was implemented in 2011–2015 under the EU Operational Program Infrastructure and Environment 2007–2013.³⁸ The project aimed to improve road safety through the use of more technologically advanced recording devices and by increasing the coverage of automatic enforcement. Phase II of the project is enabling Poland to further update its safety camera network, including with the introduction of time over distance cameras.

An analysis of the project showed that from 2008 to 2016, deaths decreased by 52% and injuries by 42% in the locations of speed cameras.³⁹

Moreover, a 2019 study looked at ten safety camera locations and their effectiveness in reducing speeds between 2016 and 2018. The results showed that in seven out of ten locations the cameras fulfilled their role effectively which contributed to the improvement of road safety.⁴⁰

³⁷ CANARD Calendar, <https://bit.ly/3hGsgU2>

³⁸ CANARD <https://bit.ly/3fhulAe>

³⁹ CANARD <https://bit.ly/3c6gS2E>

⁴⁰ Świdorski A. et al. (2019) "Increasing the effectiveness and efficiency of the automatic traffic enforcement system. Road safety analysis for the installation of new recording devices" (in Polish) Motor Transport Institute & Heller Consult <https://bit.ly/3FLgaoS>

GERMANY

SPEEDS REDUCED IN TIME-OVER-DISTANCE CAMERA TRIAL IN GERMANY

Germany is not able to provide national data on the numbers of safety cameras because enforcement is the responsibility of each Federal State as well as of the municipalities, but it is estimated that there are more than 4000 installed in the country (equal to around 48 per million population).

Time-over-distance cameras are not generally in use in German federal states, however, between December 2018 and December 2020 the German Federal State of Lower Saxony ran a pilot project with time-over-distance cameras on a 2.2km stretch of the national road B6. Despite having a speed limit of 100 km/h, the average speed before the pilot project began was 105 km/h. During the pilot project, the average speed dropped to 95 km/h, and the number of motorists driving within the speed limit rose by 40%. In addition, during the pilot project, no traffic collisions were registered on the section of road covered by the cameras, whereas four road deaths had occurred there between 2014 and 2017. The Lower Saxony Ministry of the Interior concluded that the time-over-distance cameras made a significant contribution to increasing road safety and has continued with this type of enforcement on this stretch of the road.⁴²

SWEDEN

NEW STUDY SHOWS THAT SPEED CAMERAS INCREASED SPEED COMPLIANCE

Results from a new study in Sweden show that speed cameras increased speed compliance – both close to and between cameras and reduced road deaths. Close to the camera, speed compliance increased by 22 to 56% depending on the speed limit and between cameras by 11 to 15%. On roads with speed cameras and a speed limit of 80 or 90 km/h, speed compliance close to cameras was about 95% and between cameras around 60%. Overall, mean speeds have been reduced by 3.5km/h (with the largest reductions for the 80km/h speed limit). Deaths decreased by 39% on road sections with cameras between 2003 and 2018.⁴¹

IRELAND

TIME-OVER-DISTANCE CAMERA SYSTEM IMPROVES DRIVER BEHAVIOUR

A time-over-distance camera system has been in operation within the Dublin Tunnel since mid - 2017. It has proved hugely successful in improving driver behaviour as regards speeding, with the number of drivers complying with the 80km/h speed limit increasing from 45% to just under 90%. This beneficial effect of time-over-distance cameras is also evident at a newly installed system on the M7 motorway (currently in pre-enforcement mode), where there has been an immediate and sustained improvement in measured compliance from 68% to approximately 90%.

⁴¹ Vadeby, A., Howard, C. (2022) Speed Cameras in Sweden. Effects on Speed and Traffic Safety, VTI Report 1107 (In Swedish with summary in English) <https://bit.ly/3GxAJp5>

⁴² Government of Lower Saxony, Lower Saxony is the first state to operate section control for traffic monitoring on the B6 (in German) <https://bit.ly/3grqE2x>

1.4 FOLLOWING UP ENFORCEMENT

Sending a speeding ticket is only half the story. Not many PIN countries were able to provide data on the number of speeding tickets issued that were eventually paid, but from those that did, on the whole, proportions are high (around 90%) and progress has been made since 2010. Latvia, for example, has seen the proportion of fines paid more than double since 2010, from 41% to 86%.

Table 2. Number of speeding tickets that were paid in 2010 and 2018–2020 or the last three years available. Ranked by number of fines paid in 2020, from highest to lowest

⁽¹⁾PL: number of paid tickets for those coming from speed cameras only.

⁽²⁾ES: data on the number of paid tickets on roads inside urban areas and in the regions of Catalonia and the Basque Country are not available.

⁽³⁾IT: paid tickets issued by national police only.

⁽⁴⁾FR: tickets paid by French vehicles only.

	% of fines paid			
	2010	2018	2019	2020
PL ⁽¹⁾		95%	95%	95%
SE		95%	95%	95%
NL	96%	95%	95%	95%
CY	86%	92%	92%	92%
LU	98%	88%	89%	90%
LV	41%	83%	82%	86%
IE	78%	85%	84%	84%
ES ⁽²⁾	81%	87%	87%	84%
EE	64%	76%	78%	82%
HU		81%	80%	81%
IT ⁽³⁾	55%	69%	65%	61%
PT		53%	50%	44%
FR ⁽⁴⁾			77%	

“In Italy, only 61% of speeding fines were paid in 2020. Given that around 5,000 local police forces operate in Italy and that the legislation on the use, location and calibration of speed detection instruments is complex, appeals for penalties received are often successful. These appeals are based on errors relating to the instrumentation used (insufficient signage, non-approved or non-approved devices periodically calibrated etc.) or on the notification of the sanction itself (incorrect information, errors relating to dates, times, or sent late). Furthermore, in general, the burden of proof in disputes lies with the prosecution and must be carried out within a limited time period.”

Italian PIN contributors



Some automatically detected offences can also remain entirely unsanctioned and there can be a number of reasons for this:

- not enough human resources to follow up with the fines for a high volume of offenders;
- driver liability;
- error in the vehicle registration database;
- camera software specifications not set to recognise number plates from all other EU countries;
- technical failure of the cameras to recognise or record the number plate;
- more than one vehicle on the picture;
- foreign offenders, whether from the EU or not, might remain unsanctioned, if cross border enforcement is not considered a priority (see section 5).

Powered two wheeler riders are not required to have a licence plate in front and, therefore, remain unidentified by safety cameras that photograph from the front. Motorcycle riders can also avoid sanctions in countries applying driver liability as the rider's face is covered by the helmet.

Efficiency in ensuring payment is further enhanced if the handling of fines for detected violations is largely automated and if the vehicle owner and not the vehicle driver is held liable, or is required to identify the driver, since it is easier and faster to identify the owner than the driver.⁴³ As reported by the ITF, several countries have recently strengthened their sanctions and penalties regimes for speeding violations. This has been accompanied, when needed, by a change in legislation to allow the principle of 'owner's liability', i.e. that the owner of the vehicle is by default responsible in some countries for the violation and in others for identifying who was driving the vehicle at the time of the violation.⁴⁴ Driver liability, which requires the driver to be identified following an infraction, can make it difficult or even impossible to follow up enforcement.

Of the PIN countries able to provide data for this report, 10 reported having driver liability and 9 owner liability. Seven PIN countries reported having a hybrid of the two systems (Table 3). In Ireland, for example, where an offence is detected by a camera, the penalty is issued to the registered owner of the vehicle. If the registered owner was not the driver then they are advised to nominate the driver and return the penalty to the issuing authority. The issuing authority will then issue a new penalty to the driver who is then responsible for paying the fine. In Denmark, in the case of speeding offences up to 30% above the speed limit, the vehicle owner is liable. However, for speeding offences of more than 30% above speed limit, the driver is liable.

Of the 6 PIN countries issuing the most speeding tickets per 1000 population in 2020, 3 have owner liability (BE, LV, NL), 1 has driver liability (AT) and 2 have a hybrid approach (LU and FR) (Tables 1 and 3).

Table 3. Driver or owner liability as a legal basis for traffic law enforcement
Hybrid: where liability is not simply 'owner' or 'driver' but can be one or the other in different situations.

	Does your country have driver or owner liability?
Driver	AT, DE, EE, EL, ES, IL, NO, PL, RO, RS, SE
Owner	BE, CH, CY, CZ, HR, HU, IT, LV, NL
Hybrid	DK, FI, FR, IE, LU, PT, SK

⁴³ ETSC (2019) PIN Flash 36, Reducing Speeding in Europe <https://bit.ly/3AktjUF>

⁴⁴ ITF (2018) Speed and Crash Risk <https://bit.ly/3H5kXms>



MAIN RECOMMENDATIONS TO NATIONAL GOVERNMENTS

- Introduce owner or keeper⁴⁵ liability as opposed to driver liability to facilitate enforcement of speed limits.
- Adopt national enforcement plans with yearly targets for number of checks and compliance levels, including on speeding, in line with the EC 2004 Recommendation on Traffic Law enforcement.
- Set up a transparent system for the allocation of funds generated by fines and channel them back into funding established road safety plans.
- Apply European best practice in the enforcement of speed limits, including experience in using safety cameras and time-over-distance systems.
- Countries with low numbers of safety cameras should consider extending the network.
- Install safety cameras able to detect speeding motorcycle riders and enforce their compliance with speed limits.
- Incorporate speeding offences in penalty point systems and make sure that the levels of penalty escalate as the level of speeding above the limit increases, as well as for recidivists.
- Improve the robustness of the systems to reduce appeals for fixed penalties for speeding violations.
- Intensify speed enforcement in urban areas where there are high numbers of pedestrians and cyclists.
- Build or maintain infrastructure to be self-explaining, self-enforcing and ‘forgiving’.
- Develop, and encourage speed limit-setting authorities to apply national speed limit guidelines based on the Safe System approach.
- Mandate authorities to review and regularly update speed limits (e.g. every five years) using specifications identified in the national speed limit guidelines.
- Encourage local authorities to adopt zones with speed limits of 30km/h and promote traffic calming measures in urban areas, residential areas and other areas frequently used by pedestrians and cyclists or where there is scope to increase their numbers.
- Prepare for Intelligent Speed Assistance: improve speed limit signs when needed, set up and regularly update digital maps with information on speed limits.
- Raise the public’s understanding that speeding is very dangerous and that reducing speeds by only a few km/h can significantly reduce the number and severity of collisions.
- Contribute to the EU Key Performance Indicator with the timely collection and delivery to the European Commission of data on the percentage of vehicles travelling within the speed limit.

⁴⁵ In the UK a distinction is made between a vehicle owner and keeper. The registered keeper is the driver who is responsible for taxing, insuring and maintaining the vehicle. The vehicle owner is the one who has bought the vehicle or received it as a gift. It is the keeper that is liable to pay any penalties.



MAIN RECOMMENDATIONS TO EU INSTITUTIONS

- Encourage Member States to achieve high standards on enforcement methods and practices and a greater convergence of road-safety-related traffic rules and update the 2004 EC Recommendation on Enforcement in the field of Road Safety, including the latest best practice on speed enforcement and sanctions.
- Collect and publish EU countries' enforcement plans to facilitate the exchange of best practice on enforcement across the EU and work towards developing a common road safety enforcement strategy. Continue exchanging best practice via the expert group on enforcement.
- Encourage Member States, through a European Commission Recommendation, to apply safe speed limits in line with the Safe System approach (including enforcement) for the different road types such as 30km/h on urban roads in residential areas and areas where there are high levels of cyclists and pedestrian, 70km/h on undivided rural roads and a top speed of 120km/h or less on motorways.
- Initiate a technical assistance programme to support less well-performing Member States to develop and pilot a national strategy on speed management. The approach might also include technical exchanges and twinning with other better-performing countries.
- Support the use of EU funds for cities to introduce priority measures such as 30km/h zones and speed enforcement.
- Encourage authorities to intensify traffic law enforcement, especially for speeding in urban areas, where there are high numbers of pedestrians and cyclists.
- Work with Member States to enable the necessary conditions for the functioning of Intelligent Speed Assistance, including regarding the availability of speed limits in a digital format.
- Consider the feasibility and acceptability of non-overrideable Intelligent Speed Assistance for professional drivers as a first step towards its possible adoption.
- Mandate top speed limiters on vans, as is the case for trucks and buses.
- Consider the feasibility of limiting the maximum top speed of all new vehicles as an effective way of reducing road casualties, but also air pollution, carbon dioxide emissions and noise.
- Adopt a new EU Key Performance Indicator on the enforcement effort (e.g. number of checks) and results (number of violations detected and sanctioned) over time in the priority area of speeding.
- Raise awareness of EU citizens with regard to road safety traffic rules in force through organising regular information campaigns using partners such as NGOs and other road safety stakeholders linked to police enforcement.

A close-up photograph of a person's hand holding a glass of whiskey. In the foreground, two hands are clasped together on a dark wooden table. A set of car keys is visible on the table in the lower right corner. The background is blurred, showing a person in a grey sweater.

PART II

DRINK-DRIVING AND DRUG-DRIVING

02

It is estimated that a quarter of all road deaths are related to drink-driving. If alcohol impaired drivers can be kept off the roads, thousands of lives could be saved each year. Enforcement has a key role to play, as do setting BAC limits, alcohol interlock programmes and communication campaigns. All PIN countries have set a limit on the level of alcohol in the blood above which it is illegal to drive (also known as BAC limits).⁴⁶ Nine countries have introduced a standard BAC limit of 0.2g/l and below for all drivers: Czechia, Hungary, Romania, Slovakia, Estonia, Poland, Sweden, Norway, and Serbia. 17 countries with a standard BAC limit of 0.5g/l have introduced lower limits for novice and professional drivers.

Enforcement is essential for creating a perception amongst drivers that there is a significant risk of being caught and punished when drinking and driving. Understanding road user perceptions on the risk of being subjected to drink-driving enforcement is crucial to evaluating the effectiveness of police efforts.

On average, in 2018, 23% of European respondents to a survey thought that, on a typical journey, they would be likely to be checked for drink-driving by the police (compared to 18% in 2015). Even though driver perception on the likelihood to be tested for alcohol has increased since 2015, the scale of enforcement activities in the EU remains largely insufficient.⁴⁷

2.1 DRINK-DRIVING CHECKS

All PIN countries, except Germany, Malta and Great Britain, allow for random targeted roadside alcohol breath testing. Random targeted roadside tests means that every passing driver or rider has the same probability of being selected for a drink-driving test.

Out of the 14 PIN countries able to provide data for this report, the number of alcohol roadside breath checks increased in six countries between 2010 and 2019 while it fell in the remaining eight. The number of roadside alcohol checks in Poland grew by 19% on average each year between 2010 and 2019, 12% in Hungary and in Estonia by 7% between 2012 and 2019.⁴⁸ In Great Britain the number of roadside alcohol checks fell on average each year by 12% between 2011 and 2019 and in Sweden by 11% (Fig. 3a).

SWEDEN

Sweden saw a dramatic decrease in the number of alcohol roadside breath tests per 1000 population between 2011 and 2016, but between 2018 and 2019, just before the COVID-19 pandemic hit, there was a small increase. However, looking at progress towards the national target set in Sweden between 2007 and 2020, neither the indicator based on police checks nor self-reported behaviour indicates that the proportion of drivers under the influence of alcohol has changed significantly.



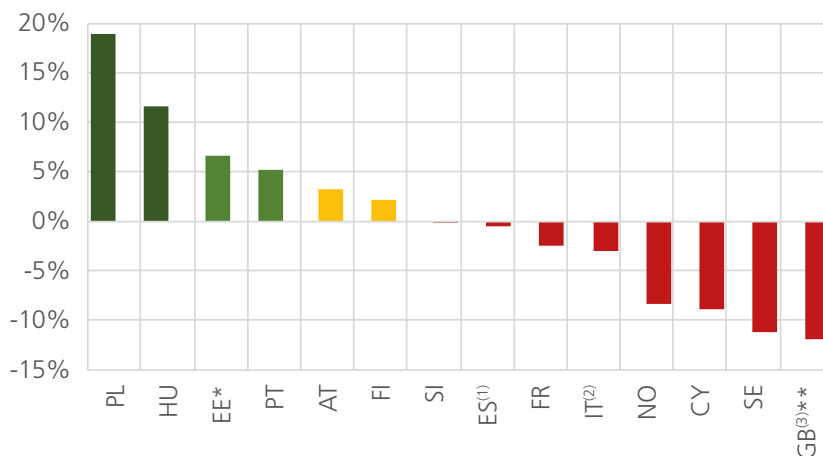
Fig.3a Average annual change in the number of alcohol roadside breath checks per 1000 population over the period 2010–2019

*2012-2019 **2011–2019

⁽¹⁾ES: checks on roads inside urban areas and in the region of the Basque Country are not available. Data for checks in Catalonia include urban areas.

⁽²⁾IT: alcohol roadside breath checks by national police.

⁽³⁾GB: number of alcohol roadside breath tests for England and Wales only. The figure for the number found to be above the legal limit includes those who refused to take the breath test.



⁴⁶ ETSC (2019) Blood Alcohol Content (BAC) Drink-driving Limits across Europe <https://bit.ly/30MLnZY>

⁴⁷ Achermann Stürmer, Y., Meesmann, U. & Berbatovci, H. (2019) Driving under the influence of alcohol and drugs. ESRA2 Thematic report Nr. 5. ESRA project (E-Survey of Road users' Attitudes) <https://bit.ly/3r0srSK>

⁴⁸ The full dataset for the decade is not available for Estonia but it should be noted that Estonia started the decade with 105 drink-driving checks per 1000 population and ended the decade with 566 drink-driving check per 1000 population.

2020 FIGURES AND COVID-19

All PIN countries able to provide data for this report saw a decrease in the number of roadside drink-driving checks during 2020 when it can be seen from Fig. 3a that this was not the trend in all countries over previous years. The changes range from a 15% decrease in Slovenia to a 72% decrease in Sweden, a 65% decrease in Norway and a 61% decrease in Poland.

Also interesting to note is that the proportions of tested drivers being over the legal limit did not change in many countries in 2020 except for in Sweden, Norway and Finland. In Sweden, in 2019, 0.9% of drivers checked were over the

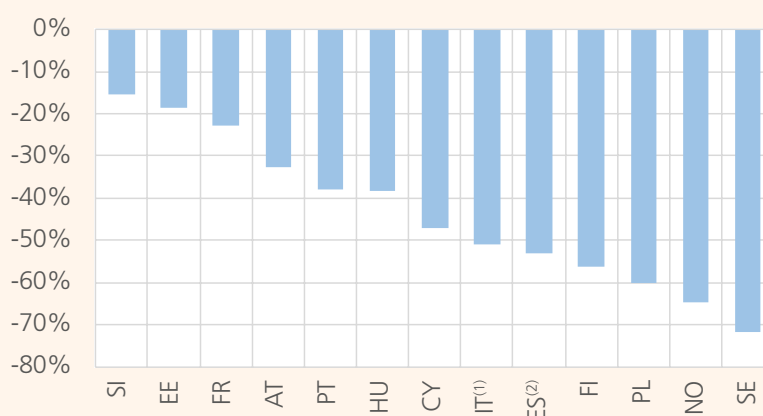
legal limit, whereas in 2020 that figure rose to 2.4%. Similarly in Norway where the proportions were 0.8% in 2019 and 2.6% in 2020, and in Finland with 1% of tested drivers being over the legal limit in 2019 and 2.2% in 2020. For all three countries, and looking at data since 2010, the proportions of drivers tested being over the legal limit have never been so high as in 2020. (Fig. 3b)

SWEDEN

Random breath testing was stopped in Sweden from 12 March 2020 due to the COVID-19 pandemic. In October 2020 the testing was resumed with restrictions. Testing in the case of suspicion was performed throughout the period.

Fig. 3b Relative change in the number of alcohol roadside breath checks per 1000 population between 2019 and 2020

⁽¹⁾IT: alcohol roadside breath checks by national police.
⁽²⁾ES: checks on roads inside urban areas and in the region of the Basque Country are not available. Data for checks in Catalonia include urban areas.



2.2 DRINK-DRIVING ENFORCEMENT LEVELS BY COUNTRY

Among the PIN countries that were able to provide data on the number of roadside police drink-driving checks, Estonia was the most active in 2019 with 696 checks carried out per 1000 population followed by Poland with 444, Hungary with 279 and Austria and Slovenia with 204 and 203 respectively (Table 2). Alcohol checks were relatively infrequent in Ireland (64 per 1000 population).

In 2019, Ireland had the lowest proportions of tested drivers found to be over the legal limit at 0.5%. Estonia, Hungary, Norway and Sweden also had fewer than 1% of tested drivers found to be over the legal limit. In Cyprus 9% of tested drivers were found to be over the legal limit and in Slovenia and France over 3%. However, these results are difficult to interpret since the roadside checks are not comparable between the countries on aspects such as randomness and the place and

time of the checks.⁴⁹ In most European countries, random (also called “targeted”) breath testing is allowed. In others, such as the UK and Germany, an element of suspicion of alcohol use is a conditional prerequisite for a police officer to be allowed to test a driver.⁵⁰

13 PIN countries do not collect data on the number of roadside alcohol checks (BE, BG, CH, CZ, DE, DK, HR, IL, LU, LV, NL, SK, RS) preventing their use as a tool to monitor progress and evaluate policies. Denmark does record the number of road users charged with drink-driving as a result of roadside breath tests and Latvia records the number of those tested found to be above the legal limit. Germany records ‘alcohol offences’, both criminal and administrative, and Luxembourg records all alcohol-related offences treated by the police in which the breath alcohol concentration or blood alcohol concentration was found to be above the legal limit or where drink-driving could be proven by driving behaviour.

⁴⁹ Houwing, S; Stipdonk H. (SWOV, 2014), Driving under the influence of alcohol in the Netherlands by time of day and day of the week <http://bit.ly/3GRYCZt>

⁵⁰ In the UK, a driver may be stopped on suspicion of some other offence and then breath tested. All drivers involved in a collision will normally be tested.

Table 4. Roadside alcohol breath tests per 1000 inhabitants and proportion of those tested found to be above the legal limit. Ranked by number of roadside breath tests in 2020, from highest to lowest

⁽¹⁾E: data refers to breath tests performed at Mandatory intoxicant Testing Checkpoints.

⁽²⁾ES: checks on roads inside urban areas and in the region of the Basque Country are not available. Data for checks in Catalonia include urban areas.

⁽³⁾IT: alcohol roadside breath tests by national police only.

⁽⁴⁾GB: number of alcohol roadside breath tests and population data for England and Wales only. The figure for the number found to be above the legal limit includes those who refused to take the breath test.

	2020		2019		2018		2017		2016		2015		2010	
	Roadside police tests per 1000 inhabitants	Proportion above the legal limit (in %)	Roadside police tests per 1000 inhabitants	Proportion above the legal limit (in %)	Roadside police tests per 1000 inhabitants	Proportion above the legal limit (in %)	Roadside police tests per 1000 inhabitants	Proportion above the legal limit (in %)	Roadside police tests per 1000 inhabitants	Proportion above the legal limit (in %)	Roadside police tests per 1000 inhabitants	Proportion above the legal limit (in %)	Roadside police tests per 1000 inhabitants	Proportion above the legal limit (in %)
EE	566	0.9%	696	0.8%	584	0.9%	513	1.0%	656	0.8%	677	0.9%	105	5.5%
PL	177	n/a	444	n/a	434	n/a	470	n/a	473	n/a	466	0.7%	88	4.9%
HU	173	1.3%	279	0.9%	298	1.0%	241	1.2%	174	1.5%	135	1.5%	126	3.5%
SI	172	3.2%	203	3.1%	171	3.3%	191	3.5%	142	3.7%	157	3.6%	200	4.7%
AT	137	2.1%	204	1.7%	197	1.6%	196	1.6%	192	1.7%	189	1.6%	123	3.7%
PT	115	1.6%	186	1.9%	172	2.2%	172	3.9%	167	2.7%	160	3.0%	112	3.8%
FR	108	3.2%	139	3.4%	145	3.4%	157	3.3%	153	3.1%	159	2.9%	174	3.4%
FI	74	2.2%	170	1.0%	249	0.8%	264	0.7%	272	0.7%	268	0.8%	201	0.8%
NO	64	2.6%	180	0.8%	177	0.7%	211	0.6%	258	0.6%	281	0.5%	367	0.2%
CY	49	9.0%	92	8.9%	102	9.0%	120	7.2%	105	7.9%	135	7.0%	213	5.3%
SE	35	2.4%	125	0.9%	116	0.9%	117	1.0%	122	1.0%	147	0.9%	287	0.6%
IE ⁽¹⁾	21	0.4%	64	0.5%	65	0.5%	n/a							
RO	n/a										72	1.8%	n/a	
LT	n/a										48	9.8%	42	10.5%
EL	n/a												164	2.1%
MT	n/a												0	46.6%
Countries where data are available for part of the road network only														
ES ⁽²⁾	69	1.1%	147	1.2%	124	1.3%	117	1.4%	115	1.5%	130	1.4%	118	1.8%
IT ⁽³⁾	10	1.7%	21	1.5%	21	1.6%	23	1.5%	24	1.5%	25	1.4%	25	1.9%
GB ⁽⁴⁾	n/a		5	17.8%	6	16.3%	6	15.6%	8	12.7%	9	11.5%	n/a	
Countries where data for roadside alcohol breath tests are not available														
BE	n/a													
BG	n/a													
CZ	n/a													
DE	n/a													
DK	n/a													
HR	n/a													
LU	n/a													
LV	n/a													
NL	n/a													
SK	n/a													
RS	n/a													
IL	n/a													
CH	n/a													

2.3 DRINK-DRIVING DEATHS

Approximately 2700 people were recorded killed in alcohol related collisions in police records in 2019 in 24 EU countries compared to around 3600 in 2010. However, these two numbers are likely to be lower than the true numbers due to a high level of underreporting of road deaths attributed to alcohol and data collection limitations (see indicator box).

Fig.4a shows the difference between the average annual change in the number of road deaths attributed to alcohol and the corresponding change for all other road deaths over the period 2010-2019, using each country's own method of identifying alcohol related deaths (see indicator box).

Collectively in the EU, alcohol-related deaths have been reduced by 1% per year faster than other road deaths between 2010 and 2019.

In 16 PIN countries, alcohol related road deaths have decreased more quickly than other road deaths. In Bulgaria, alcohol related road deaths decreased 18% faster than all other road deaths since 2010 and in Cyprus by 13%.

In the Republic of Serbia and Slovakia all other road deaths decreased more quickly than road deaths related to alcohol. In Hungary all other road deaths decreased more quickly than road deaths related to alcohol (Fig. 4a) while the number of roadside breath checks increased over the same period (Fig 3a). Norway also saw all other road deaths decrease more quickly than road deaths related to alcohol (Fig. 4a), but has also seen a decrease over the period of the number of roadside breath checks (Fig 3a).

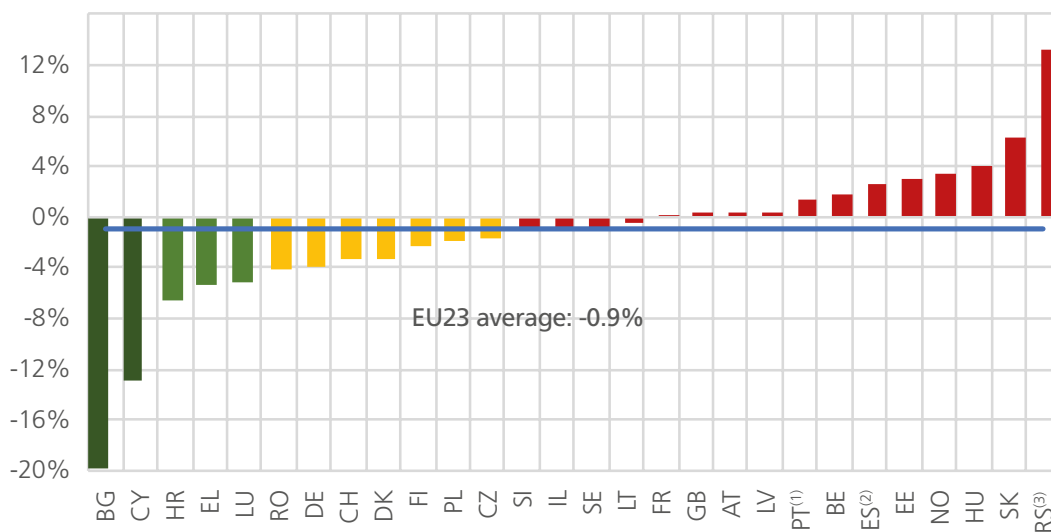
Fig. 4a Difference between the average annual change in the number of road deaths attributed to alcohol and the corresponding change for other road deaths over the period 2010-2019

⁽¹⁾PT: Number of road deaths attributed to alcohol are not available, so numbers of positive forensic post-mortem tests of drivers, passengers and pedestrians were used instead.

⁽²⁾ES: data for Catalonia and the Basque Country are not available.

⁽³⁾RS: data collection methodology changed in 2016. Serbia is working to improve alcohol-related fatal collision data collection according to the EU guidelines on the Common Accident and Injury Database (CaDas).

EU 23: EU 27 Member States minus Ireland, Italy, Malta and the Netherlands due to insufficient data.



2020 DATA AND COVID-19

The impact of the COVID-19 pandemic and accompanying restrictions in mobility varies between PIN countries for all road deaths and for road deaths attributed to alcohol. Luxembourg saw road deaths attributed to alcohol reduce from 10 to 3. Latvia also saw a reduction of over 66% and

Romania and Austria also registered reductions of over 30%.

Cyprus, Norway and Hungary on the contrary saw increases of over 30% in the numbers of road deaths attributed to alcohol between 2019 and 2020.

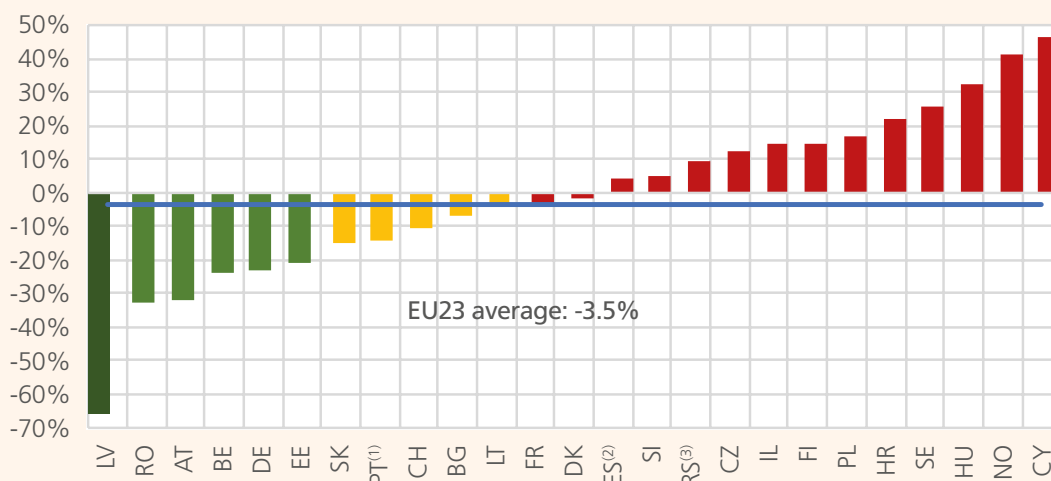
Fig.4b The difference between the relative change in the number of road deaths attributed to alcohol and the corresponding change for other road deaths between 2019 and 2020

⁽¹⁾PT: Number of road deaths attributed to alcohol are not available, so numbers of positive forensic post-mortem tests of drivers, passengers and pedestrians were used instead.

⁽²⁾ES: data for Catalonia and the Basque Country are not available.

⁽³⁾RS: data collection methodology changed in 2016. Serbia is working to improve alcohol-related fatal collision data collection according to the EU guidelines on the Common Accident and Injury Database (CaDas).

EU 23: EU 27 Member States minus Ireland, Italy, Malta and the Netherlands due to insufficient data.



DRINK-DRIVING DEATHS INDICATOR

Levels of deaths attributed to drink-driving cannot be compared between countries, as there are large differences in the way in which countries define and record them. Researchers in the European research project SafetyNet recommend using the definition: 'any death occurring as a result of a road accident in which any active participant was found with a blood alcohol level above the legal limit'.⁵¹ National definitions as provided by PIN panellists are available in the Annexes. While some EU countries have adopted the SafetyNet recommended definition, in practice, it seems to be mostly drivers or riders involved in collisions who are tested for alcohol. Moreover, in some countries, drivers are not tested for alcohol if they were killed on the spot and, in others, killed road users are not tested for alcohol unless a prosecutor requires it or the police suspect the collision to be due to drink-driving. Deaths may only be classified as 'drink-driving deaths' if the driver or rider is

above the legal limit and these also differ between countries.

Countries are therefore compared on the basis of developments in deaths attributed to drink-driving relative to developments in other road deaths, using each country's own method of identifying alcohol-related deaths (Figs.4a and 4b).

The numbers of deaths attributed to drink-driving were supplied by the PIN panellists when available (see Annexes).

This ranking has been published previously in the ETSC report (2019) Progress in reducing drink-driving and other alcohol-related road deaths in Europe as well as the ETSC (2015) 9th Road Safety PIN Report updating the rankings published in the ETSC (2012), Drink-Driving: Towards Zero Tolerance report, and ETSC (2010) 4th Road Safety PIN Report, Chapter 3, which also mentions the issue of underreporting of drink-driving deaths.

⁵¹ SafetyNet (2009) Project Activity Report <https://bit.ly/3DmMayz>



2.4 DRUG-DRIVING

Both illicit and licit drugs can disrupt the psychological state of the driver and impair their driving performance. Using multiple drugs simultaneously, or in conjunction with alcohol, increases the risk of a collision even further.

The primary general deterrent factor when it comes to drug-driving is the perceived risk of detection.⁵² However, an EU survey carried out in 2018 shows that amongst the general driving population, only 14% think that they are likely to be checked by the police for the use of illegal drugs. This compares to 23% for alcohol checks.⁵³ It is crucial therefore that enforcement is carried out properly and visibly.

⁵² EU funded project DRUID (Driving under the Influence of Drugs, Alcohol and Medicines) <https://bit.ly/2YbVAun>

⁵³ Achermann Stürmer, Y., Meesmann, U. & Berbatovci, H. (2019) Driving under the influence of alcohol and drugs. ESRA2 Thematic report Nr. 5. ESRA project (E-Survey of Road users' Attitudes) <https://bit.ly/3GQXKv>

RECOMMENDATIONS TO NATIONAL GOVERNMENTS

- Allow for the testing of drink-driving in all police roadside checks and introduce obligatory testing for alcohol of all collision participants in all fatal and serious collisions. Introduce roadside evidential breath testing procedures.
- Intensify enforcement of drink-driving laws by setting targets for minimum levels of alcohol checks of the motorist population, e.g. 1 in 5 motorists should be checked each year. Couple enforcement with publicity activities.
- If resources allow, combine alcohol and drug roadside police checks.
- Mandate the use of alcohol interlocks for professional drivers. Establish and actively mandate the use of alcohol interlocks as part of rehabilitation programmes for recidivist and high-level first time offenders, combined with medical supervision.
- Encourage voluntary fitment of alcohol interlocks to cars in households where one or more drivers have difficulty in avoiding driving after drinking.
- Consider adopting a zero-tolerance level for drink-driving (e.g a maximum BAC of 0.2g/l) for all drivers.
- Collect the annual number of drink-driving checks and those which were positive, and the number of deaths and serious injuries in drink-driving collisions.

RECOMMENDATIONS TO EU INSTITUTIONS

- Update the 2004 EC Recommendation on Enforcement in the field of Road Safety to include the latest best practice on drink and drug-driving enforcement.
- Propose a Directive on drink-driving, setting a zero-tolerance level for all drivers. As a first step, strengthen the existing EU Recommendation on permitted BAC 2001/115 as announced in the EC Road Safety Policy Framework 2021–2030.
- Work on an EU-wide monitoring system to determine the prevalence of drink and drug driving in the EU and the number of drink-driving deaths and injuries. This should include mandatory testing for alcohol of at least all drivers involved in fatal collisions (if not all road users).

- As a first step towards wider use of alcohol interlocks, legislate their use by professional drivers.
- Within the context of the revision of the Driving Licence Directive, allow drivers with alcohol dependency to participate in a rehabilitation programme and be issued with a conditional licence with mandatory use of an alcohol interlock, as long as it is combined with medical supervision.
- Improve the formulation of the current driving under the influence of alcohol Key Performance Indicator to: 'a Key Performance Indicator on % of drivers driving within the legal BAC limit among drivers that have been breath-tested by the police in roadside checks'.
- Encourage Member States to collect data on people driving within the legal BAC limit based on police records instead of self-reported behaviour.
- Introduce a Key Performance Indicator on reduction in the number of alcohol-related road deaths.
- Encourage Member States to collect data on alcohol-related road deaths based on the SafetyNet definition.
- Adopt a new EU Key Performance Indicator on the enforcement effort (e.g. number of checks) and results (number of violations detected and sanctioned) over time in the priority areas of drink and drug driving.
- Continue to invest in development of drug detection technology, including improved duration times and reliability, lower costs for both roadside screening and post-collision testing and laboratory based confirmatory testing.
- Adopt common minimum standards for roadside drug-driving enforcement and ensure that police forces are properly trained in when and how to perform drug screening, field impairment tests and use of roadside screening devices.

A close-up photograph of a person's hands and torso while wearing a seatbelt in a car. The person is wearing a blue denim jacket. One hand is resting on the seatbelt strap, and the other is near the buckle. The seatbelt is black with a red buckle. The background is dark, suggesting the interior of a car.

PART III

SEATBELT USE

03

The seatbelt remains the single most effective safety feature in vehicles. Other important safety features such as airbags work as designed only if occupants are restrained by their seatbelts.

The seatbelt remains the single most effective safety feature in vehicles

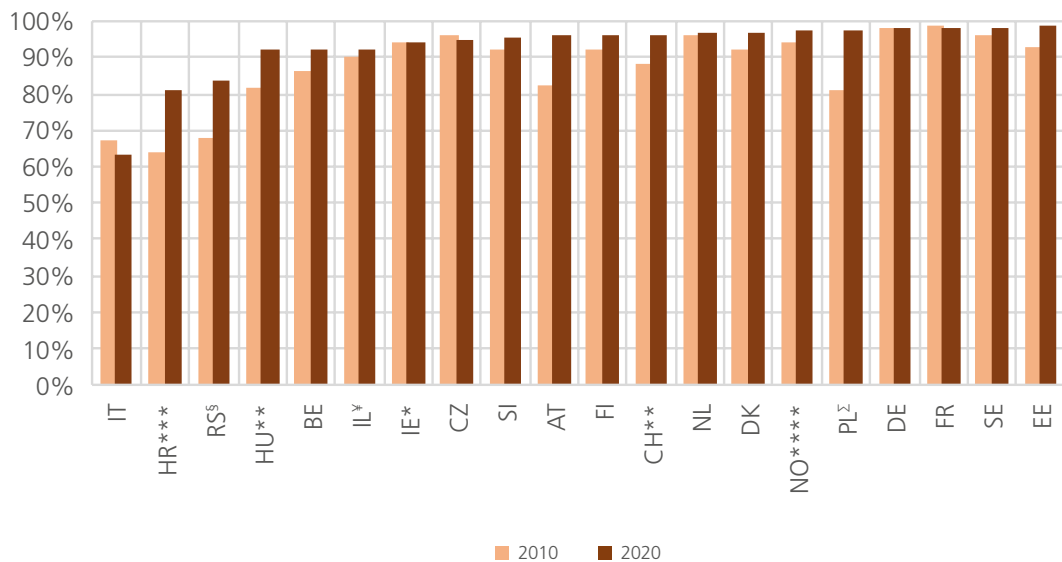
According to the World Health Organisation's (WHO) global status report on road safety conducted in 2018, not using a seatbelt and not using a child restraint system (CRS) while driving are two of the top five behavioural reasons that increase the risk of traffic-related injury or death.⁵⁴ The use of a seatbelt reduces the risk of death by 48% for drivers and 37% for passengers (aged above 5 years) in the front seats of a car, in comparison to not wearing a seatbelt. Using a seatbelt for passengers in the rear seats reduces the risk by 44% in comparison to passengers not wearing their seatbelt.⁵⁵ Progress has been made in both front seat and rear seat wearing in all countries monitoring seatbelt use, due to awareness-raising campaigns and seatbelt reminders in new vehicles.

Despite the legal obligation to wear a seatbelt across the EU27 Member States and the mandatory seatbelt reminder (SBR) systems in all seat positions on new car models sold in the EU starting from September 2019,⁵⁶ usage in cars in the EU is estimated to be only 93% for front seat occupants (Fig.5) and 79% (Fig.6) for rear seat passengers in countries that are monitoring wearing rates. The effectiveness of SBR in motivating seatbelt use has been analysed in several on-road observational studies.⁵⁷

3.1 SEATBELT WEARING IN FRONT SEATS

Of the PIN countries able to provide data, seatbelt wearing rates are highest in Estonia (99%), France, Poland, Germany and Sweden with 98% of occupants of the front seats belting up (Fig.5). Seatbelt wearing rates in front seats remain as low as 63% in Italy and 81% in Croatia. However, Croatia saw an increase in front seat wearing rates of 20 percentage points between 2010 and 2020, while Italy witnessed a decrease from 67% to 63%. Front seat wearing rates increased for nearly all countries, with the majority having a wearing rate of above 90%.

Fig. 5 Seatbelt wearing rates in front seats of cars and vans in 2020 and 2010 for comparison
 *2011 and 2018, adult road users observed in cars, light goods vehicles and heavy goods vehicles.
 **2010 and 2021
 ***2015 and 2021
 ****2010 and 2019, data are available on rural roads only
[§]2008–2020
[¶]2016–2019
[‡]2013–2020



⁵⁴ WHO (2018) Global status report on road safety <http://bit.ly/3x5tSAo>

⁵⁵ Glassbrenner, D, and Starnes, M (2009) Lives Saved Calculations for Seatbelts and Frontal Air Bags <https://bit.ly/3qsYxFU>

⁵⁶ ETSC (2018) Seatbelt reminders on every new car seat from 2019 <http://bit.ly/3EcRUvT>

⁵⁷ Lie, A. et al. (2009) Intelligent seatbelt reminders – do they change driver seatbelt use in Europe? <http://bit.ly/3nL87SZ>

CROATIA IMPROVING SEATBELT WEARING RATES IN CROATIA

One of the strategic objectives of the Croatian National Road Safety Programme 2011-2020 was to improve seatbelt wearing rates, raising them to 98%. Fines for not wearing a seatbelt were doubled and enforcement improved. In addition, every Police Administration organised prevention campaigns in cooperation with NGOs. These campaigns included brochures, billboard advertising and wide media coverage of the enforcement activities with the aim of raising people's awareness. As a result, 80% of front seat occupants wore the seatbelt in 2020 compared to 64% in 2010. Yet there is still work to be done, especially for rear seats as still only 36% of rear passengers buckled up in 2020 (compared to 16% in 2010).



The usage rates used in this ranking present a simplified picture of a much more complex phenomenon. In reality, there is no clear-cut division between wearers and non-wearers of seatbelts. Non-wearers may use the seatbelt sometimes but not at all times, depending for example on what speed they are travelling at, what sort of road they are using, whether they are undertaking a longer journey, and whether there are other occupants wearing belts. The proportion of car occupants using seatbelts (i.e. the wearing rate) is estimated through roadside counts. Observers are placed at selected locations on motorways, urban and rural roads, where traffic characteristics allow for this type of observation. Data for different road types are then aggregated based on shares of traffic per road type.

The EU-funded research project SafetyNet has developed stringent criteria for comparability of seatbelt wearing rates across countries.⁵⁸

For front seats this country ranking used combined driver and passenger wearing rates. Where only the driver rate was available, the front seat rate was considered to be identical to this rate (as recommended by SafetyNet).

Seatbelt wearing rates were provided by PIN panellists and are available in the Annexes.

⁵⁸ SafetyNet (2009) Project Activity Report <https://bit.ly/3DmMayz>

3.2 SEATBELT WEARING IN REAR SEATS

Disparities between countries are more significant when it comes to wearing seatbelts in rear seats. In Germany 99% of rear seat passengers wear a seatbelt, whereas in Italy only 11% do (Fig.6). Wearing a seatbelt in rear seats is still exceptional in Serbia (21%) and Croatia with 36% rear seat passengers belting up, and low in Hungary (58%). The biggest increases in the last ten years in rear seatbelt wearing rates were recorded in Serbia, Croatia, Slovenia, Austria, Estonia, Czechia and Denmark.

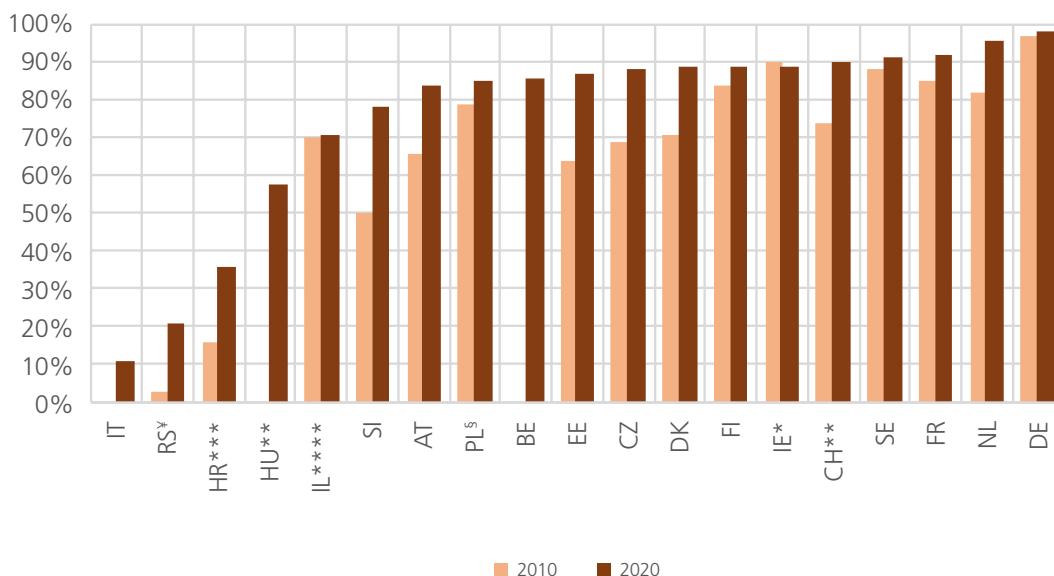
Car occupants largely underestimate the consequences of not wearing seatbelts in the back. The lower wearing rates could also reflect the absence of (enhanced) seatbelt reminders (SBR) on rear passenger seats. Research from the UK has shown that failure to wear a seatbelt is more prominent among some demographics, especially those aged under 35 or from deprived areas, who also tend to drive older cars with no SBR.⁵⁹ Unbelted rear seat passengers, who are thrown forwards into the back of the front seats, significantly increase the risk of death for themselves and for belted front seat occupants.⁶⁰ When collision speed increases, so does the force on the body when it hits the front seat or the front window.

Figs. 5 and 6 show that seatbelt wearing rates have increased since 2010 in all countries that collected the data, except Italy, Czechia, Israel and France. And yet, the proportion of killed vehicle occupants who are not wearing their seatbelt remains higher than is accounted for by the protective effects of belt wearing. ETSC's report on motorway safety revealed that up to 60% of those killed on motorway collisions are not wearing seatbelts.⁶¹

Moreover, in the EU all children up to 150 cm in height must use a child restraint. Yet in 2018, fifteen years after child restraint systems became mandatory in the EU, the data suggest that child seat safety remains a significant problem, with many parents either unaware of how to fit seats correctly or given incorrect advice at the point-of-sale.⁶²

Fig. 6 Seatbelt wearing rates in rear seats of cars and vans in 2020 and 2010 for comparison

*2011 and 2018, adult road users observed in cars, light goods vehicles and heavy goods vehicles.
 **2010 and 2021
 ***2015 and 2021
 ****2016–2019
 †2008–2020
 ‡2013–2020



⁵⁹ PACTS (2020) Seatbelts: Time for Action <http://bit.ly/3EU8nW6>

⁶⁰ Wasted lives (Seatbelts) <http://goo.gl/43M30M>

⁶¹ ETSC (2015) PIN Flash Report 28, Ranking EU Progress on Motorway Safety <http://goo.gl/FycSbj>

⁶² ETSC (2018) PIN Flash Report 34, Reducing Child Deaths on European Roads <https://bit.ly/3En5QDE>

3.3 DYNAMICS IN SEATBELT ENFORCEMENT LEVELS

Despite the fact that the proportion of killed vehicle occupants who were not wearing their seatbelt is disproportionately high, seatbelt enforcement is not a primary target for the police in many EU Member States (Fig.7a, Table 5). In a 2018 survey only 26% of those questioned said that it was likely they would be checked for seatbelt wearing during a typical trip.⁶³

Fig.7a shows that seatbelt tickets went down significantly over the period 2010-2019 in almost all PIN countries that collect data. The number of tickets for non-use of the seatbelt fell most sharply in Norway, Great Britain, Sweden and Estonia. The number of tickets for failing to wear a seatbelt increased by 12% on average each year in Serbia, by 7% in Portugal, by 6% in Slovakia and 2% in Italy.

More lives will be lost unnecessarily unless seatbelt and child restraint use is increased substantially. Countries should introduce mandatory checking of all vehicle occupants each time a vehicle is stopped and include failure to wear a seatbelt or a child restraint in demerit point systems. A 2020 study from PACTS showed that Northern Ireland, where there is a penalty of three point for not wearing a seatbelt, has the lowest percentage of deaths where a seatbelt was not used of any UK nation.⁶⁴

Countries could also consider automated enforcement of seatbelt wearing. The Netherlands, Denmark and Spain already have automated enforcement of seatbelt wearing.

SPAIN NEW SAFETY CAMERAS DETECT SEATBELT WEARING

Spain installed 225 new safety cameras in 2017 that can detect whether or not a driver is wearing a seatbelt.⁶⁵ According to official figures for 2015, 22% of deaths on inter-urban roads were drivers who failed to wear a seatbelt. Drivers pictured without a seatbelt will be fined €200 along with the loss of three driving licence points.

Fig. 7a Average annual change (in %) in the number of tickets for non-use of seatbelts per 1000 population over the period 2010–2019

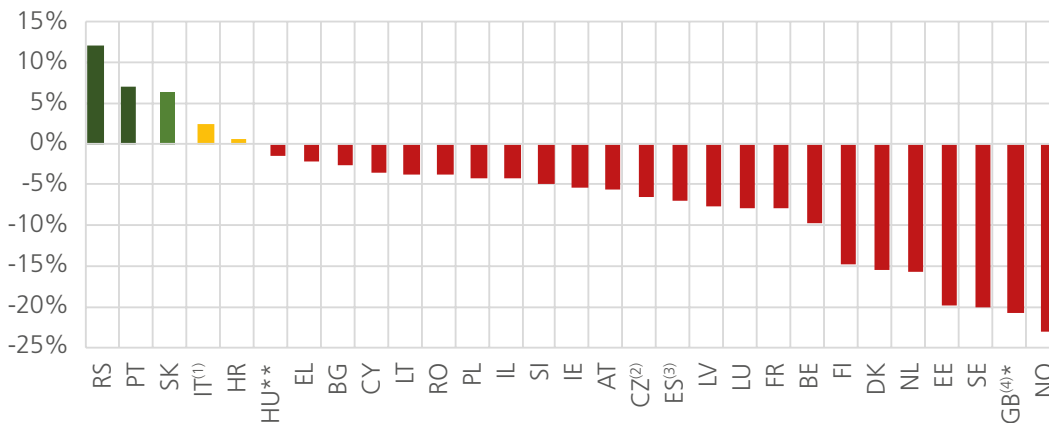
⁽¹⁾IT: tickets following checks by national police, Carabinieri and police in main cities (provincial capitals).

⁽²⁾CZ: data cover detected seatbelt offences and not the number of tickets issued.

⁽³⁾ES: number of tickets following checks on roads inside urban areas and in the regions of Catalonia and the Basque Country is not available.

⁽⁴⁾GB: number of tickets following checks in England and Wales only.

*2011–2019
**2013–2019



⁶³ Nakamura, H., Alhajjaseen, W., Kako, Y. and Kakinuma, T. (2020): Seat belt and child restraint systems. ESRA2 Thematic report No. 7. ESRA project (E-Survey of Road users' Attitudes). International Association of Traffic and Safety Sciences (IATSS), 2-6-20 Yaesu, Chuo-ku, Tokyo 104-0028, Japan <https://bit.ly/3AW0YV4>

⁶⁴ PACTS (2020) Seatbelts: Time for Action <http://bit.ly/3EU8nW6>

⁶⁵ ETSC (2017) New Spanish safety cameras to detect seatbelt use <http://bit.ly/3EcVMNr>

2020 DATA AND COVID-19

The impact of the COVID-19 pandemic and accompanying restrictions in mobility varies between PIN countries but the reduction in seatbelt tickets shown in the trend from 2010 to 2019 can also be observed in 2020 although percentage reductions are larger.

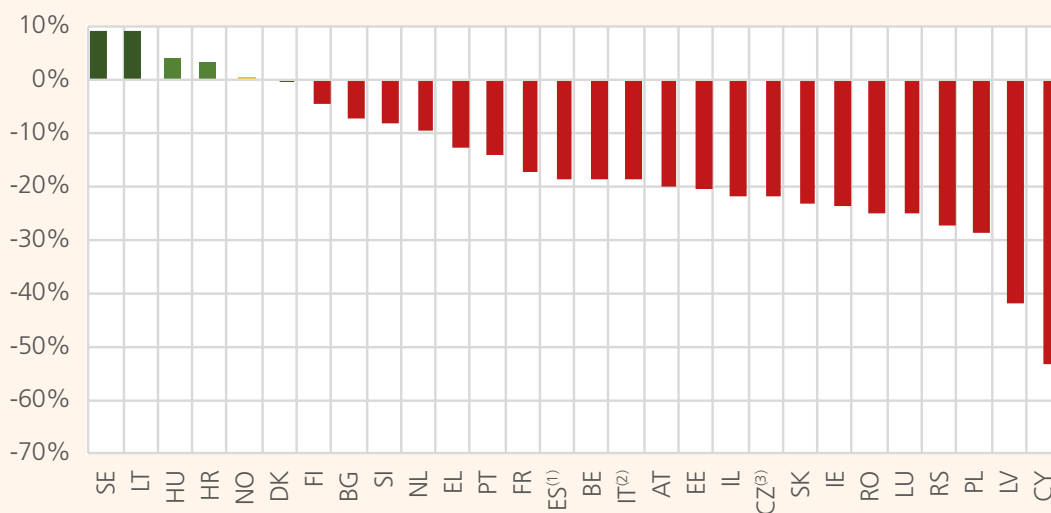
However, countries such as Serbia, Italy, Portugal and Slovakia that saw an increase in the number of tickets issued for the non-use of seatbelt in the decade 2010–2019, registered a decrease from 2019 to 2020. On the contrary, Sweden, Lithuania and Hungary observed an increase in the number of tickets issued in 2020.

Fig. 7b Relative change in the number of tickets for non-use of seatbelts per 1000 population between 2019 and 2020

⁽¹⁾ES: number of tickets following checks on roads inside urban areas and in the regions of Catalonia and the Basque Country is not available.

⁽²⁾IT: tickets following checks by national police, Carabinieri and police in main cities (provincial capitals).

⁽³⁾CZ: data cover detected seatbelt offences and not the number of tickets issued.



3.4 SEATBELT ENFORCEMENT LEVELS BY COUNTRY

The number of tickets issued for failure to wear a seatbelt was highest in Serbia in 2020 with 29 tickets per 1000 inhabitants, followed by Croatia and Slovenia with 18 tickets per 1000 inhabitants, Romania with 15 tickets per 1000 inhabitants and Israel with 12 tickets per 1000 inhabitants.

The European Roads Policing Network (ROADPOL) organises coordinated seatbelt enforcement operations with police officers all over Europe. The campaign, Operation Seatbelt, is conducted once a year and lasts for one week.⁶⁶

⁶⁶ ROADPOL Operation Seatbelt <https://bit.ly/3HOXDdC>

Table 5. Number of seatbelt tickets per 1000 inhabitants. Ranked by number of seatbelt tickets in 2020, from highest to lowest

⁽¹⁾CZ: data cover detected seatbelt offences and not the number of ticket issued.

⁽²⁾SE: tickets for failure to use a seatbelt use on front seat passengers only.

⁽³⁾IT: tickets following checks by national police, Carabinieri and police in main cities (provincial capitals).

⁽⁴⁾ES: number of tickets following checks on roads inside urban areas and in the regions of Catalonia and the Basque Country are not available.

⁽⁵⁾GB: tickets following checks in England and Wales only.

	Seat belt tickets per 1000 inhabitants										
	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
RS	29.5	40.5	22.2	25.0	25.0	25.1	17.9	16.0	12.7	12.6	13.6
HR	17.9	17.3	20.8	19.4	20.9	22.8	21.5	19.2	17.9	19.1	17.8
SI	17.8	19.4	16.7	23.7	16.3	19.6	23.8	22.4	22.1	25.8	31.3
RO	15.3	20.4	20.4	21.2	23.6	23.5	24.4	29.4	22.9	28.0	29.1
IL	11.9	15.2	14.1	12.5	10.1	10.4	7.8	7.5	6.2	27.0	34.5
CY	9.9	21.2	17.6	17.9	17.6	12.9	12.6	15.2	29.4	24.8	25.2
AT	8.8	11.1	11.7	11.6	11.3	12.0	15.2	15.5	17.1	17.6	16.3
BG	8.5	9.2	9.1	8.8	9.2	6.9	9.0	9.3	10.1	11.1	11.2
LT	7.0	6.4	7.6	6.8	7.2	7.4	7.2	7.9	7.6	7.8	11.6
HU	6.2	5.9	5.5	6.6	5.9	5.2	6.8	6.5	0.0	0.0	0.0
PL	4.9	6.8	7.2	8.6	8.8	10.7	11.4	10.1	9.8	9.8	10.4
LV	4.6	7.9	7.5	8.8	12.8	12.6	12.6	14.0	14.5	16.3	13.4
BE	3.7	4.6	4.7	5.3	6.6	7.1	9.2	9.0	7.8	10.3	11.4
EL	2.8	3.2	3.1	2.9	3.2	2.7	3.2	3.2	3.0	3.3	4.5
CZ ⁽¹⁾	2.7	3.5	3.9	4.5	5.1	6.5	5.4	5.4	5.8	6.8	6.8
LU	2.4	3.2	3.5	2.8	3.5	4.3	5.3	5.3	4.2	6.0	6.3
PT	2.3	2.7	2.7	2.5	1.4	1.5	1.2	1.4	1.5	1.6	1.6
SK	2.3	2.9	3.7	3.2	2.9	2.9	3.1	2.4	2.0	1.6	2.5
NL	2.3	2.5	2.0	2.2	2.1	1.2	3.7	4.3	3.9	6.5	11.3
DK	2.3	2.3	2.3	2.2	3.2	4.8	5.8	6.9	6.8	7.6	7.8
FR	2.0	2.4	2.3	2.4	2.4	2.7	3.0	3.6	4.1	4.3	4.5
EE	1.9	2.3	2.4	3.3	3.8	5.0	6.4	7.8	11.1	12.9	13.9
IE	1.8	2.3	2.4	2.3	2.1	2.3	2.7	2.7	2.9	3.4	3.8
FI	1.0	1.1	1.6	1.7	2.6	3.0	3.0	3.4	4.0	5.1	4.7
SE ⁽²⁾	0.8	0.8	0.7	0.7	1.0	1.5	2.1	2.6	3.0	3.6	4.0
NO	0.4	0.4	0.8	2.0	2.8	2.7	3.3	3.8	4.4	5.2	6.2
Countries where data are available for part of the road network only											
IT ⁽³⁾	3.5	4.3	3.4	3.4	3.2	3.1	2.9	3.0	3.7	2.9	3.1
ES ⁽⁴⁾	2.5	3.1	2.6	2.5	2.7	3.1	4.0	4.6	5.0	5.2	3.8
GB ⁽⁵⁾	n/a	0.7	0.4	0.3	0.3	0.5	0.6	1.3	2.1	n/a	
Countries where data on the number of seatbelt tickets are not available											
MT	n/a										
DE	n/a										
CH	n/a										

RECOMMENDATIONS TO NATIONAL GOVERNMENTS

- Increase enforcement of restraint systems in both front and rear seats. Each driver, as well as any passengers, stopped for whatever reason should be checked for seatbelt wearing.
- Set enforcement targets and enforcement plans for child seats and seatbelt use.
- Introduce automatic seatbelt enforcement.
- Include seatbelt wearing offences in penalty point systems.
- Collect yearly seatbelt wearing rates for the various road and occupant categories (driver, front and rear passengers and child restraints).
- Monitor progress to assess the need for more information campaigns and training activities on correct installation of child restraint systems. Conduct nation-wide awareness campaigns educating parents about the importance of child restraints and correct fitment.

RECOMMENDATIONS TO EU INSTITUTIONS

- Extend mandating fitment as standard equipment of an enhanced seatbelt reminder system for all vehicle seats with audible and visual warnings.
- Encourage Member States to achieve high standards on enforcement methods and practices and a greater convergence of road-safety-related traffic rules and update the 2004 EC Recommendation on Enforcement in the field of Road Safety, with the latest best practice guidelines on non-use of seatbelt enforcement and sanctions.
- Support the development of restraint systems that adapt to the needs of the user, their individual bio-mechanics and the severity of the specific collision. Introduce seatbelt pre-tensioners and load limiters as standard.
- Facilitate and support the exchange of best practice in terms of the use and enforcement of child restraint systems across Member States.
- Include a Key Performance Indicator on vehicle occupants killed not wearing seatbelts or child restraints (results shown separately) to identify the actual scope of the problem and take appropriate measures.
- Complement the indicator of the percentage of vehicle occupants using the seatbelt with a Key Performance Indicator on the percentage of child occupants in cars correctly restrained (checks to be performed in a parking space or a rest area).
- Adopt a new EU Key Performance Indicator on the enforcement effort (e.g. number of checks) and results (number of violations detected and sanctioned) over time in the priority area of seatbelt and child restraint use.

A photograph showing a person's hands on a steering wheel and holding a smartphone. The person is wearing a light-colored shirt and blue pants. The background is the interior of a car, including the steering wheel and dashboard. The image has a semi-transparent dark overlay.

PART IV

**MOBILE PHONE USE
WHILE DRIVING**

04

Distracted driving is a growing problem in road safety. Collision involvement risk rises with increased mobile phone use. Those driving and using mobile phones a lot are twice as likely to be involved in a collision than those making minimal use of mobile phones.⁶⁷ A simulator study carried out by TRL benchmarked the use of a mobile phone while driving against impairment from alcohol.⁶⁸ The overall conclusion was that driving behaviour was affected more during a phone conversation than by having a blood alcohol level at the UK legal limit of 0.8g/l.

Driver behaviour is affected more during a phone conversation than by having a 0.8g/l BAC

There is a long list of distractions that undermine the driver's or the rider's ability to perform the driving task, but the use of mobile phones while driving appears to be widespread and growing.

An ESRA survey in 2018 revealed that 48% of drivers reported making or answering a call with a hands-free device, 29% reported making or answering a call using a hand-held mobile phone, and 24% read a text message, email or checked social media while driving at least once in the last 30 days.⁶⁹

Distracted pedestrians and cyclists (listening to music, making phone calls, sending messages) are also a concern, especially as more people walk and cycle.

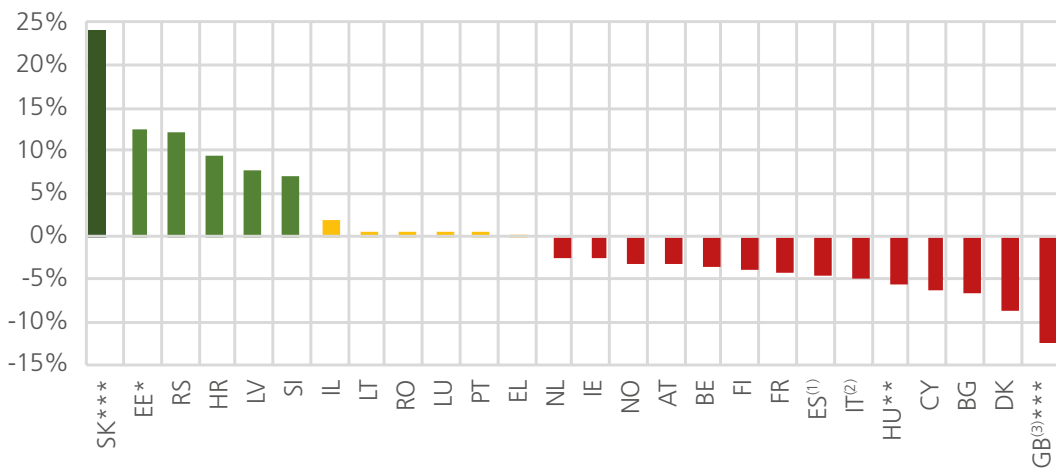
Police enforcement, combined with publicity campaigns, has the potential to reduce the illegal use of a mobile phone while driving.⁷⁰ Even though the phenomenon of using a mobile phone while driving is widespread, enforcement levels remain low (Fig.8a and Table 6).

4.1 ENFORCEMENT DYNAMICS OF ILLEGAL USE OF A MOBILE PHONE

Of the 25 PIN countries that provided the number of tickets for illegal use of mobile phone over the period 2010–2019, 11 countries saw an increase and 14 countries saw a decrease in the number of tickets (Fig.8a). The number of tickets for illegal use of mobile phones increased by 24% each year on average in Slovakia over the period 2011–2019, by 12% in Estonia (2011–2018) and Serbia, 9% in Croatia and 8% in Latvia. On the other hand, ticket numbers have declined in Great Britain by 12% on average each year (2011–2019), by 9% in Denmark and by 7% in Bulgaria.

Fig.8a Average annual change (in %) in the number of tickets for illegal use of mobile phone per 1000 population over the period 2010–2019

⁽¹⁾ES: number of tickets following checks on roads inside urban areas and in the regions of Catalonia and the Basque Country is not available.
⁽²⁾IT: tickets following checks by national police, Carabinieri and police in main cities (provincial capitals).
⁽³⁾GB: tickets following checks in England and Wales only.
 *2011–2018
 **2013–2019
 ***2011–2019



⁶⁷ Jeanne Breen Consulting (2009) Car telephone use and road safety <https://bit.ly/32HVI08>

⁶⁸ Burns et al. (2002) How dangerous is driving with a mobile phone? Benchmarking the impairment of alcohol (TRL) <http://bit.ly/3AiCuVQ>

⁶⁹ ESRA (2018) Distraction (use of mobile phone) <https://bit.ly/3xmvk1g>

⁷⁰ The definition of illegal use of a mobile phone varies across the EU. For the regulation in each country, see the EC website Going Abroad: <http://goo.gl/PhwJUO>

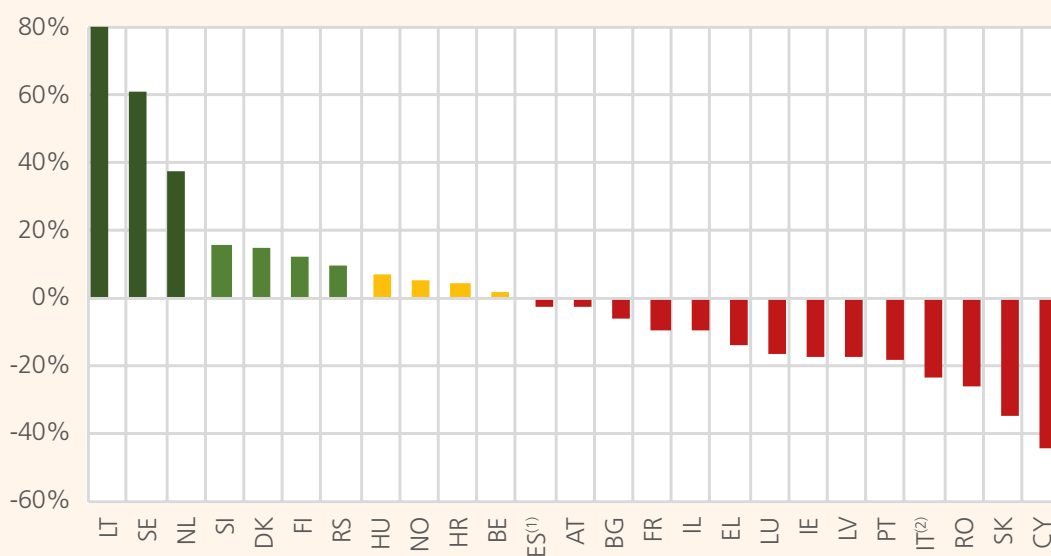
2020 DATA AND COVID-19

The impact of the COVID-19 pandemic and accompanying restrictions in mobility varies between PIN countries. Lithuania and the Netherlands had a significant increase in the number of tickets for illegal use of mobile phone from 2019 to 2020 by 80% and 38% respectively while both countries showed a decrease in the number of tickets in the period 2010–2019.

On the contrary Slovakia and Latvia, which observed an increase in the number of tickets in the period 2010–2019, are showing a consistent decrease of 34% and 17% respectively from 2019 to 2020.

Fig. 8b Relative change in the number of tickets for illegal use of mobile phone per 1000 population between 2019 and 2020.

⁽¹⁾ES: number of tickets following checks on roads inside urban areas and in the regions of Catalonia and the Basque Country is not available.
⁽²⁾IT: tickets following checks by national police, Carabinieri and police in main cities (provincial capitals).



4.2 ENFORCEMENT LEVELS FOR ILLEGAL USE OF MOBILE PHONE BY COUNTRY

Slovenia and Israel are the countries with the highest number of tickets for illegal use of mobile phones among the PIN countries who provided data, each with around 17 tickets per 1000 inhabitants in 2020 (Table 6). Austria, Lithuania and Croatia follow with around 14, 12 and 11 tickets for illegal use of mobile phone per 1000 inhabitants respectively, although it should be noted that numbers have never been so high in Lithuania as in 2020. In contrast, only one person was fined for illegal use of a mobile phone per 1000 inhabitants in Finland, Latvia, Greece, Poland and Sweden.

In the last decade, the number of issued tickets for illegal use of mobile phones per 1000 inhabitants increased significantly in Slovenia (from 10 to 17), Lithuania (from 5 to 12, although 7 in 2019) and Hungary (from 5 to 11). On the other hand, the number of tickets issued for illegal use of mobile phone per 1000 inhabitants decreased considerably in Cyprus, from 28 tickets in 2010 to 9 tickets in 2020 (although it should be noted that in 2019 the figure stood at 16).

Table 6. Number of tickets for illegal mobile phone use per 1000 inhabitants. Ranked by number of tickets for illegal use of mobile phone in 2020, from highest to lowest.

⁽¹⁾ES: number of tickets for illegal use of mobile phone following checks on roads inside urban areas and in the regions of Catalonia and the Basque Country are not available.

⁽²⁾IT: tickets following checks by national police, Carabinieri and police in main cities (provincial capitals).

⁽³⁾GB: number of tickets for illegal use of mobile phone following the checks in England and Wales only.

	Mobile phone tickets per 1000 inhabitants										
	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
SI	17.5	15.1	11.0	14.3	7.0	9.9	11.3	9.7	3.5	9.0	9.6
IL	16.6	18.4	13.9	12.3	9.5	7.3	7.0	8.8	12.6	13.3	13.9
AT	13.6	14.0	13.1	13.0	12.1	12.7	15.4	16.3	17.7	17.8	15.4
LT	12.5	6.9	7.1	6.5	6.1	7.1	7.0	8.0	9.3	6.5	4.9
HR	11.1	10.6	10.0	9.0	8.7	9.2	9.5	7.5	5.7	5.2	4.6
NL	9.7	7.0	4.7	4.4	3.5	2.0	4.0	4.1	3.8	6.0	8.5
RS	9.4	8.5	6.6	5.1	5.0	4.8	4.3	3.5	3.0	2.9	2.9
BE	9.3	9.2	8.7	8.9	9.6	9.7	10.9	10.7	10.9	12.1	11.5
CY	8.9	16.1	17.7	17.5	16.6	12.0	11.3	14.1	29.3	30.6	27.8
FR	5.5	6.1	6.0	5.9	5.1	5.3	5.8	6.9	7.7	8.1	8.1
DE	5.0	n/a									
IE	4.9	5.9	6.5	5.9	6.0	6.2	7.0	6.3	6.7	7.3	7.6
DK	4.9	4.2	3.9	3.5	4.9	7.3	7.9	8.7	7.9	7.7	6.9
LU	4.7	5.7	5.8	5.2	5.4	5.0	5.7	4.9	4.5	6.1	5.5
NO	3.2	3.1	3.2	3.4	3.8	3.4	3.4	3.6	4.0	4.1	4.3
PT	2.9	3.6	4.0	3.8	3.2	3.7	3.3	3.8	4.3	4.1	3.0
CZ	2.7	3.0	n/a								
HU	2.7	2.5	3.5	3.3	3.3	3.4	4.2	3.8	0.0	0.0	0.0
RO	2.6	3.5	3.6	3.3	3.9	3.6	3.9	4.2	3.3	3.4	3.2
SK	2.6	3.9	4.8	4.2	3.4	3.6	2.1	1.6	1.2	0.8	0.0
LV	2.1	2.6	1.8	1.6	2.0	1.8	1.3	1.4	1.4	1.4	1.0
BG	1.8	1.9	1.9	1.4	1.4	1.0	2.2	2.5	2.1	2.6	3.1
SE	1.4	0.9	0.2	n/a							
PL	1.4	1.9	1.9	n/a		3.2	3.2	2.4	1.9	1.5	1.3
EL	1.3	1.5	1.7	2.2	2.4	1.8	2.1	2.2	1.7	1.7	1.7
FI	1.0	0.9	1.3	1.1	1.5	1.4	1.1	1.2	1.5	1.6	1.5
EE	n/a		2.8	1.9	1.1	1.1	0.6	1.0	1.8	0.8	0.0
Countries where data are available for part of the road network only											
ES ⁽¹⁾	2.6	2.6	2.5	2.4	2.4	2.8	3.4	3.7	3.6	3.5	3.1
IT ⁽²⁾	1.9	2.5	2.1	2.2	2.4	2.4	2.3	2.6	3.2	3.6	3.3
GB ⁽³⁾	n/a	0.5	0.7	0.9	1.4	1.5	0.5	0.9	1.6	n/a	
Countries where data on the number of tickets for illegal use of mobile phone are not available											
CH	n/a										
MT	n/a										

More work is needed to improve the systematic collection of mobile phone use in collision data to assess the extent and distribution of a growing problem of driver distraction country by country. This will allow prevention efforts to be effectively targeted.⁷¹

⁷¹ WHO (2011) Mobile phone use: a growing problem of driver distraction <http://bit.ly/3FiiYTK>



CROATIA PREVENTION OF DRIVER DISTRACTION PRIORITY IN CROATIAN NATIONAL ROAD SAFETY PLAN

The number of tickets issued for illegal mobile phone use per 1000 population more than doubled in Croatia over the decade 2010 to 2020 from 4.6 in 2010 to 11.1 in 2020.

Police officers in Croatia have intensified surveillance of drivers using a mobile phone while driving in recent years. Preventative actions have also been organised at a national level with the publication of brochures, billboard advertising and a wide range of media activities aiming to raise awareness among drivers of the dangers of using a mobile phone while driving. In addition, amendments made to the Road Traffic Safety Act in 2019 also seek to deter drivers from using a mobile phone while driving by doubling the fine for the offence.

The prevention of driver distraction remains a priority in the Croatian National Road Safety Plan for 2021 to 2030.



NETHERLANDS SMART CAMERAS DETECTING MOBILE PHONE USE

The Netherlands has had a ban on using mobile phones while driving since 2002 for drivers, moped riders and disabled persons using special vehicles. The ban was extended to light moped riders in 2009 and to all vehicle users, including cyclists, in 2019.

In 2020, the Netherlands began issuing fines following detection of mobile phone use by a new generation of cameras. With these cameras, drivers holding a phone behind the wheel can be photographed. If the system determines that the driver is holding a phone, the photo is automatically forwarded to the relevant agency where an investigating officer will determine whether there is indeed a violation. Fines can then be sent out automatically, similarly to the process of speed-violations detected by cameras.

During a test phase with two cameras on a national road and a motorway, 120,000 vehicles were observed of which some 400 drivers were fined for holding a phone in their hand.

The Dutch road safety research organisation SWOV has recently published a report on new developments in enforcement of restrictions on mobile device use and warns that some drivers are circumventing detection by putting their phone in their lap.⁷²

PAN-EUROPEAN ENFORCEMENT OPERATIONS

Every year, ROADPOL, the European Roads Policing Network, organises ten pan-European coordinated enforcement operations.

In September 2021, ROADPOL organised a 'FOCUS ON THE ROAD' operation, highlighting distraction. 17 countries participated in the operation and checked for the prohibited use of mobile phones, other technical devices and other forms of distraction. The police forces of the participating countries checked over 1,625,000 road users at more than 47,500 control spots with 420,075 different types of violations found.

The operation found 46,261 (2.8%) drivers using their mobile phone to call or text while driving without hands-free equipment, 171 drivers were using their device as a navigation system while holding it in their hand and 14,124 drivers were caught distracted by other sources including: watching TV/DVD, reading a newspaper or eating while driving. During the operation accompanying checks were also made. In 57,643 cases (3.5%) drivers or passengers were not using their seatbelt.

"These numbers clearly show how important distraction controls are, as there are too many drivers distracted by technical equipment instead of paying attention to the road. Let it be clear that overestimation of one's own driving ability and the wrong assessment of traffic situations are often the reason for serious traffic accidents. Distraction gravely extends reaction times."

Henk Jansen, ROADPOL Operational Working Group Secretary
National Police of the Netherlands

⁷² SWOV (2020) Enforcement of the ban on handheld phone use <https://bit.ly/3xmmlw5>



INFOTAINMENT HMI

In recent years, the use of in-vehicle infotainment systems has increased. Research has however shown that systems such as Apple CarPlay and Android Auto, that display smartphone apps on in-car displays, impair reaction times behind the wheel more than alcohol and cannabis use. Moreover, controlling them via touch screen resulted in reaction times that were even worse than texting while driving.⁷³

In addition, advanced driver assistance systems (ADAS) such as adaptive cruise control and lane keeping assistance are becoming increasingly common. However, manufacturers use different

symbols to inform the driver of the status of such systems. Research in turn found that drivers have difficulties interpreting the systems' symbols on the vehicle's dashboard.⁷⁴ In light of the upcoming deployment of vehicles with ADAS and automated driving systems, the human-machine interface (HMI) of vehicles should be regulated to ensure commonality across vehicles of both different brands and driving modes (manual, assisted and automated). The European Commission has announced it will evaluate the need for promoting the harmonisation of human-machine interfaces to ensure all drivers and users can interact with vehicles without compromising safety.⁷⁵

⁷³ Ramnath, Kinnear, Chowdhury, Hyatt (2020), Interacting with Android Auto and Apple CarPlay when driving: The effect on driver performance <https://bit.ly/3IKTUOz>

⁷⁴ Perrier, Louw, Carsten (2021), User-Centred Design Evaluation of Symbols for Adaptive Cruise Control (ACC) and Lane Keeping Assistance (LKA). Cognition, Technology & Work, 23:685-703 <https://bit.ly/3s1W84w>

⁷⁵ European Commission (2020) EU Road Safety Policy Framework 2021-2030. Next steps towards 'Vision Zero' <https://bit.ly/349RyJh>

RECOMMENDATIONS TO NATIONAL GOVERNMENTS

- Conduct intensive enforcement actions of one-week duration on illegal use of mobile phone at least twice a year, coupled with intensive publicity campaigns and report the effort.
- Include illegal use of a mobile phone while driving in penalty point systems.
- Introduce automatic enforcement of restrictions on mobile phone use.
- Introduce procedures which allow police to verify whether a mobile phone was used at a time of a fatal collision by establishing information exchange between the police and mobile network providers.

RECOMMENDATIONS TO EU INSTITUTIONS

- Update the 2004 EC Recommendation on Enforcement in the field of Road Safety to include the latest best practice guidelines on enforcement and sanctions against illegal use of mobile phones.
- Encourage member states to include data on distraction in their reporting to the European Commission's CARE database of road collisions.
- Ban use of all mobile phones while driving.
- Encourage telecom companies to develop a driving mode that will automatically detect that its owner is driving and turn off all notifications.

- Acknowledge that use of handheld mobile devices is just one form of distraction. Among others, hands-free devices are also a source of distraction.

- Adopt (technical) requirements for vehicles with regards to their human-machine interface (HMI) design, with a view to minimising distraction from modern infotainment systems and ensuring commonality of HMI across all vehicles (brands) and for all driving modes (manual driving, assisted driving, automated driving).

- Adopt a new EU Key Performance Indicator on the enforcement effort (e.g. number of checks) and results (number of violations detected and sanctioned) over time in the priority area of illegal use of mobile devices.

RECOMMENDATION TO CAR-MAKERS

- Until the requirements on HMI are adopted, publish test results that show in-vehicle information and infotainment systems comply with the EU's statement of principles on human-machine interface design. The guidelines state that systems "should be designed to support the driver and should not give rise to potentially hazardous behaviour".

PART V

CROSS BORDER ENFORCEMENT



05

According to the European Commission, non-resident drivers account for approximately 5% of road traffic in the EU, and a foreign-registered car is around three times more likely to commit a traffic offence than a domestically registered one.⁷⁶ The Commission also gives the example of France, where speeding offences committed by foreign registered cars reach approximately 25% of the total, with the figure going up to 40-50% of the total during periods of high transit and tourism. The automated detection of a violation by safety cameras and automated identification of vehicles and owners are being used increasingly across the EU.

In order to address the issue of non-resident road traffic offenders and guarantee the principle of non-discrimination, the EU adopted a Directive on Cross Border Enforcement 2015/413 (CBE) which covers the main offences causing road death and serious injury in the EU.⁷⁷ The CBE Directive aims to facilitate the enforcement of financial penalties against drivers who commit an offence in a different EU member state to the one where the vehicle concerned is registered.

Cross border enforcement is supported by EUCARIS, the European Vehicle and Driving Licence Information system, allowing Member States to exchange vehicle and driving licence registration information.

The CBE Directive is a tool that can help achieve greater compliance with traffic laws, improve road safety and ensure equal treatment of resident and foreign drivers by reducing the impunity of the latter. However, it is for the Member State where the offence is committed to decide on the follow-up and punishment for the traffic offence. In case of non-payment of a fine, the Council Framework Decision on mutual recognition of financial penalties enables a judicial or administrative authority to transmit a financial penalty directly to an authority in another EU country and to have that penalty recognised and executed. Moreover, drivers who have not paid a fine and return to the country in question may also face action – in the same way as a local resident with an unpaid fine.

According to the EC impact assessment, the full implementation of the CBE Directive would save between 350 and 400 road deaths each year.⁷⁸ A major reduction could be achieved in mitigating the three most risky behavioural offences of speeding, drink-driving and non-use of seatbelts.

The European Commission website⁷⁹ provides relevant information on traffic rules enforced in all 27 EU Member States, related to the eight offences covered by the Cross Border Enforcement Directive, as well as a downloadable smartphone app. The Directive's implementation date was May 2015.

The evaluation study of the Directive's implementation showed that, in 2015, half of the detected road traffic offences committed by non-residents were not investigated and approximately half of the financial penalties for those road traffic offences by non-residents that had been investigated were not successfully enforced. Practically all offences where offenders refused to pay financial penalties were not enforced and all successfully enforced penalties were due to voluntary payments.⁸⁰

5.1 IMPROVEMENTS NEEDED AT NATIONAL LEVEL

Only 10 EU Member States were able to provide data for this report on the number of automatically detected offences committed by non-residents. And it can be seen that the proportions of those followed up vary greatly from one country to another.

In Austria, Hungary and Latvia in 2020 all the offences were followed up with a letter sent to the owner of the vehicle but varying proportions of the penalties issued for those offences were eventually paid – 100% in Slovakia, 65% in Austria, 52% in Latvia and 45% in Hungary. On the other hand, 38% of offences committed by non-residents were followed up with a letter in Portugal in 2020 but a relatively high proportion of the penalties issued were paid (86%) (Table 7).

⁷⁶ European Commission MEMO/10/642 (2010) <https://bit.ly/3p3RbYL>

⁷⁷ EU Directive 2015/413 Facilitating cross-border exchange of information on road-safety-related traffic offences <https://bit.ly/3ppicEX>

⁷⁸ European Commission (2019) Inception Impact Assessment Cross Border Enforcement of Traffic Rules <https://bit.ly/3DnKq7U>

⁷⁹ European Commission Going Abroad <https://bit.ly/3dfejwG>

⁸⁰ European Commission (2020) Staff working document on the Sustainable and Smart Mobility Strategy <https://bit.ly/3CQ8kJg>

Table 7. Number of automatically detected offences committed by non-residents and the proportion of followed-up offences.

⁽¹⁾IT: 2010-2015: data cover all offences listed in the CBE Directive 2015/413 committed by non-residents. Year 2015-2020: data cover only automatically detected speeding offences committed by non-residents.

*2016–2020

Ranked by the number of followed up offences in 2020.

	2015			2020		
	Number of automatically detected offences committed by non-residents	Proportion of followed up offences (the letter was sent to the owner of the vehicle after committing the offence)	Proportion of followed up offences that were paid	Number of automatically detected offences committed by non-residents	Proportion of followed up offences (the letter was sent to the owner of the vehicle after committing the offence)	Proportion of followed up offences that were paid
AT*	1,500,000	100%	65%	1,200,000	100%	65%
HU	64,755	100%	98%	115,241	100%	45%
LV	1,555	100%	62%	81,306	100%	52%
FR	3,023,349	60%	68%	1,789,215	100%	52%
SK	n/a			7,441	100%	100%
ES	272,098	36%	48%	128,610	90%	65%
IT ⁽¹⁾ *	10,511	69%	17%	10,857	57%	11%
PT	34,839	70%	97%	46,720	38%	86%
NL	595,630	n/a		870,000	n/a	
PL*	133,057	n/a	18%	111,830	n/a	

AUSTRIA "EUCARIS SALZBURG CBE" COOPERATION TOOL

Building upon the data exchange set out by the Cross Border Enforcement (CBE) Directive and in order to take the next step in CBE enforcement – from 'voluntary' to 'mandatory' payment – the EUCARIS "Salzburg CBE" cooperation tool has been developed and implemented by Austria, Bulgaria, Croatia and Hungary.

"Salzburg CBE" is a digitised mechanism for CBE second step/follow-up proceedings, tailor-made for 'mass' offences, such as speeding. Using the EUCARIS "Salzburg CBE" Service, the participating Member States can digitally transmit requests and responses for:

1. identification of the driver
2. sending and service of CBE documents
3. identification of addresses of relevant persons (holder, driver, witness)
4. cross-border execution of final CBE decisions

"Salzburg CBE" does not interfere with, but rather supports, the existing national or/and EU legislation/proceedings. By providing a digital mechanism for legal assistance in CBE cases with structured digital forms, translation (costs) are no longer needed for legal CBE assistance.

Since the operational start in February 2020 more than 50,000 "Salzburg CBE" transactions have been successfully carried out between the participating Member States Austria, Bulgaria, Croatia and Hungary. The EUCARIS "Salzburg CBE" cooperation tool is open to all Member States.



5.2 IMPROVEMENTS AT EU LEVEL: THE REVISION OF THE DIRECTIVE COULD PROVIDE A UNIQUE OPPORTUNITY TO COMPLETE THE ENFORCEMENT CHAIN

The Cross Border Enforcement Directive is due to be revised in 2022. This instrument aims to put in place an important missing link in the enforcement chain thus enabling the information exchange needed to follow through police and enforcement authority efforts to achieve fuller compliance with traffic law and improve road safety. For better implementation of the Directive, improved EU tools are needed to enable cross border cooperation on road traffic offence investigations and mutual recognition of financial penalties specifically for traffic offences.

ETSC would also welcome an update based on best practice of the EC Recommendation on Enforcement in the field of Road Safety 2004/345 as a step forward. The EC Recommendation 2004/345 on enforcement has made a difference to traffic law enforcement in EU countries. In the years immediately after its publication the Recommendation stimulated discussion and best practice exchange. Member states should continue the implementation of the Recommendation. In the Recommendation EU Member states are asked to apply, in a national enforcement plan, what is known to be best practice in the enforcement of speed, alcohol and seatbelt legislation.

The Recommendation also stresses that the follow-up of detected offences should be “effective, proportionate and dissuasive”. Finally, the Recommendation includes the need to combine enforcement with information for the public, which will be given in the form of publicity campaigns aiming at making the public conscious of road safety and reminding them of the importance of complying with the rules. Moreover, the EU institutions should link into plans outlined in the EU Road Safety Strategy where enforcement is a priority with a commitment to review options in improving the Directive 2015/413 on cross-border enforcement (CBE) of traffic offences and a possible legislative initiative on the mutual recognition of driving disqualifications.

Joint enforcement actions on the key priorities, such as the Roadpol’s ‘Speed Marathon’, should also be encouraged as this helps foster political will and helps exchange best practice. EU funds for infrastructure (Cohesion and Connecting Europe Funds) should also be used to support the EU Member States’ use of recognised enforcement best practices.

There is a growing need for common minimum EU standards for automated enforcement equipment. Technical specifications of safety cameras vary from country to country. Therefore, there is a risk that a sanction imposed in an EU Member State is challenged by a non-resident offender on the grounds that the checking equipment used to detect the offence did not comply with the specification of the country of residence of the offender.

RECOMMENDATIONS TO MEMBER STATES

- Apply the Directive on Cross Border Enforcement 2015/413 in full, setting targets for high level of follow-up of non-resident offenders and applying all means to reach the target as soon as possible.
- Raise awareness of EU citizens with regard to road safety traffic rules in force through organising regular information campaigns using partners such as NGOs and other road safety stakeholders linked to police enforcement.
- Regularly inform the European Commission of any changes to road safety related legislation so that this can be communicated reliably at an EU level.
- In case of non-payment apply the Council Framework Decision 2005/214.
- Support the recast of the Framework Decision 2005/214, especially if this provides the opportunity to include civil/administrative offences as this would provide an important final part in the enforcement chain.
- Support the preparation of best practice guidelines on road safety enforcement and the review of strengthening sanctions, as foreseen under Article 11 of the Directive.

RECOMMENDATIONS TO EU INSTITUTIONS

Within the context of the revision of Directive 2015/413 concerning cross-border exchange of information on road safety related traffic offences:

- Revise the Directive to strengthen the enforcement chain, including mandatory notification by the State of Offence in accordance with their national legislation.
- In case of non-payment of fines, encourage Member States to apply the Council Framework decision 2005/214 on the principle of mutual recognition of financial penalties.
- Adapt existing EU mutual assistance procedures to deal with cross-border road traffic offences.
- Develop common minimum standards on enforcement equipment and encourage use of EU funds for enforcement of the key offences in line with best practice.
- Introduce use of EU co-financing for police cross-border enforcement of road traffic law to increase safety.
- Encourage earmarking of national revenues from financial penalties to enforcement of road traffic law to increase safety.
- Consider including the mutual recognition of non-financial penalties such as driving disqualifications and demerit point systems.
- Fund research on enforcement in order to develop effective enforcement strategies and tactics (building on the work of previous EU funded projects such as ESCAPE and PEPPER).
- Improve the reporting functionality of EUCARIS to report automatically to the European Commission the number of conducted and failed searches.
- Consider extension of scope to cover other road safety related offences

ANNEXES

ISO CODES

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

TOTAL POPULATION

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
AT	8,351,643	8,375,164	8,408,121	8,451,860	8,507,786	8,584,926	8,700,471	8,772,865	8,822,267	8,858,775	8,901,064	8,932,664
BE	10,839,905	10,951,266	11,035,948	11,099,554	11,150,516	11,209,044	11,267,910	11,322,088	11,376,070	11,431,406	11,522,440	11,566,041
BG	7,421,766	7,369,431	7,327,224	7,284,552	7,245,677	7,202,198	7,153,784	7,101,859	7,050,034	7,000,039	6,951,482	6,916,548
CY	819,140	839,751	862,011	865,878	858,000	847,008	848,319	854,802	864,236	875,899	888,005	896,005
CZ	10,462,088	10,486,731	10,505,445	10,516,125	10,512,419	10,538,275	10,553,843	10,578,820	10,610,055	10,649,800	10,693,939	10,701,777
DE	81,802,257	80,222,065	80,327,900	80,523,746	80,767,463	81,197,537	82,175,684	82,521,653	82,792,351	83,019,213	83,166,711	83,155,031
DK	5,534,738	5,560,628	5,580,516	5,602,628	5,627,235	5,659,715	5,707,251	5,748,769	5,781,190	5,806,081	5,822,763	5,840,045
EE	1,333,290	1,329,660	1,325,217	1,320,174	1,315,819	1,314,870	1,315,944	1,315,635	1,319,133	1,324,820	1,328,976	1,330,068
ES ⁽¹⁾	36,843,616	36,990,788	37,118,531	37,069,963	36,928,796	36,887,474	36,867,743	36,919,601	36,998,862	37,192,750	37,491,128	n/a
FI	5,351,427	5,375,276	5,401,267	5,426,674	5,451,270	5,471,753	5,487,308	5,503,297	5,513,130	5,517,919	5,525,292	5,533,793
FR	62,765,235	63,070,344	63,375,971	63,697,865	64,027,958	64,300,821	64,468,792	64,618,416	64,725,052	64,821,954	65,123,843	67,439,599
EL	11,119,289	11,123,392	11,086,406	11,003,615	10,926,807	10,858,018	10,783,748	10,768,193	10,741,165	10,724,599	10,718,565	10,682,547
HR	4,302,847	4,289,857	4,275,984	4,262,140	4,246,809	4,225,316	4,190,669	4,154,213	4,105,493	4,076,246	4,058,165	4,036,355
HU	10,014,324	9,985,722	9,931,925	9,908,798	9,877,365	9,855,571	9,830,485	9,797,561	9,778,371	9,772,756	9,769,526	9,730,772
IE	4,549,428	4,570,881	4,589,287	4,609,779	4,637,852	4,677,627	4,726,286	4,784,383	4,830,392	4,904,240	4,964,440	5,006,907
IT	59,190,143	59,364,690	59,394,207	59,685,227	60,782,668	60,795,612	60,665,551	60,589,445	60,483,973	60,359,546	59,641,488	59,257,566
LU	502,066	511,840	524,853	537,039	549,680	562,958	576,249	590,667	602,005	613,894	626,108	634,730
LV	2,120,504	2,074,605	2,044,813	2,023,825	2,001,468	1,986,096	1,968,957	1,950,116	1,934,379	1,919,968	1,907,675	1,893,223
LT	3,141,976	3,052,588	3,003,641	2,971,905	2,943,472	2,921,262	2,888,558	2,847,904	2,808,901	2,794,184	2,794,090	2,795,680
MT	414,027	414,989	417,546	422,509	429,424	439,691	450,415	460,297	475,701	493,559	514,564	516,100
NL	16,574,989	16,655,799	16,730,348	16,779,575	16,829,289	16,900,726	16,979,120	17,081,507	17,181,084	17,282,163	17,407,585	17,475,415
PL	38,022,869	38,062,718	38,063,792	38,062,535	38,017,856	38,005,614	37,967,209	37,972,964	37,976,687	37,972,812	37,958,138	37,840,001
PT	10057999	10030968	9976649	9918548	9869783	9839140	9809414	9792797	9779826	9798859	9,802,128	9,802,128
RO	20,294,683	20,199,059	20,095,996	20,020,074	19,947,311	19,870,647	19,760,585	19,643,949	19,530,631	19,414,458	19,328,838	19,186,201
SE	9,340,682	9,415,570	9,482,855	9,555,893	9,644,864	9,747,355	9,851,017	9,995,153	10,120,242	10,230,185	10,327,589	10,379,295
SI	2,046,976	2,050,189	2,055,496	2,058,821	2,061,085	2,062,874	2,064,188	2,065,895	2,066,880	2,080,908	2,095,861	2,108,977
SK	5,390,410	5,392,446	5,404,322	5,410,836	5,415,949	5,421,349	5,426,252	5,435,343	5,443,120	5,450,421	5,457,873	5,459,781
GB ⁽²⁾	55464619	55,932,409	56,369,298	56,757,917	57,178,300	57,646,891	58,133,131	58,562,781	58,960,693	59,307,685	n/a	n/a
CH	7,785,806	7,870,134	7,954,662	8,039,060	8,139,631	8,237,666	8,327,126	8,419,550	8,484,130	8,544,527	8,606,033	8,667,088
IL	7,695,072	7,836,592	7,984,458	8,134,464	8,296,871	8,463,427	8,628,592	8,797,944	8,967,594	9,140,473	9,293,900	n/a
NO	4,858,199	4,920,305	4,985,870	5,051,275	5,107,970	5,166,493	5,210,721	5,258,317	5,295,619	5,328,212	5,367,580	5,391,369
RS	7,306,677	7,251,549	7,216,649	7,181,505	7,146,759	7,114,393	7,076,372	7,040,272	7,001,444	6,963,764	6,926,705	6,871,547
EU27	428,608,317	427,766,417	428,346,271	429,090,138	430,574,621	431,383,477	432,485,752	433,188,192	433,711,230	434,387,454	434,788,276	447,007,596

Source: Eurostat, except in the case of Israel, data provided by the panellist.

⁽¹⁾ Population data exclude the regions of Catalonia and the Basque Country

⁽²⁾ Population data for England and Wales only

Fig.1a - Average annual change (in %) in the number of speeding tickets issued per thousand population over the period 2010-2019

LV****	40%
PT	20%
BG	15%
LT	11%
DK	10%
EE**	10%
IT ⁽¹⁾	9%
HU**	8%
RS****	7%
IL	6%
CY***	5%
HR	5%
PL	5%
ES ⁽²⁾	5%
GB ^{(3)*}	4%
FR	4%
BE	3%
FI ⁽⁴⁾	3%
AT ⁽⁵⁾	2%
CZ ⁽⁵⁾	2%
LU*****	1%
EL	-0.3%
SI ⁽⁶⁾	-1%
NL	-1%
NO	-3%
SK***	-4%
SE	-6%
IE*	-9%

⁽¹⁾IT - speed tickets following checks by national police, Carabinieri and police in main cities (provincial capitals)

⁽²⁾ES - data on the number of speeding tickets on roads inside urban areas and in the region of Catalonia and the Basque Country are not available.

⁽³⁾GB - total number of speeding tickets and other sanctions imposed as an alternative to a speeding ticket in England and Wales. Data on the number of tickets in Scotland is not available. This figure includes incomplete sanctions.

⁽⁴⁾FI - speed camera: data prior to 2020 include written warning letters

⁽⁵⁾AT, CZ - data cover detected speeding offences and not the number of tickets issued

⁽⁶⁾SI - fines following traffic collisions are included as it was not possible to distinguish them from the data on speeding tickets.

*2011–2019

**2012–2019

***2014–2019

****2015–2019

*****2016–2019

Fig.1b - Relative change in the number of speeding tickets issued per thousand population between 2019 and 2020

LT	123%
IL	73%
SE	33%
EE	33%
IE	32%
BG	28%
PT	25%
NO	4%
HR	4%
FR	3%
PL	2%
SI ⁽¹⁾	2%
BE	0%
LV	-6%
NL	-7%
DK	-10%
HU	-10%
EL	-12%
SK	-16%
AT ⁽²⁾	-16%
IT ⁽³⁾	-17%
LU	-17%
ES ⁽⁴⁾	-17%
RS	-23%
CY	-34%
FI ⁽⁵⁾	-46%

⁽¹⁾SI - fines following traffic collisions are included as it was not possible to distinguish them from the data on speeding tickets.

⁽²⁾AT - data cover detected speeding offences and not the number of tickets issued

⁽³⁾IT - speed tickets following checks by national police, Carabinieri and police in main cities (provincial capitals)

⁽⁴⁾ES - data on the number of speeding tickets on roads inside urban areas and in the region of Catalonia and the Basque Country are not available.

⁽⁵⁾FI - speed camera: data prior to 2020 include written warning letters

Table 2 (Fig.2) Number of safety cameras

	Total number in 2021 of					
	Fixed speed cameras	Time over distance speed cameras	Mobile speed cameras	Empty speed camera boxes	Front photography	Latest year available if not 2021
AT	167	9	167	n/a	80	2020
BG	23	0	185	6	n/a	
CY	2	n/a	n/a	n/a	n/a	
CZ	21	n/a	n/a	n/a	n/a	2020
DK	20	0	82	0	n/a	
EE	44	0	8	69	n/a	
FI	268	0	31	783	n/a	
FR	2341	97	943	0	n/a	2020
HR	104	0	0	284	n/a	
HU	365	0	189	0	n/a	2020
IT ⁽¹⁾	56	154	454	0	n/a	2020
LU	49	2	7	0	n/a	
LV	100	0	12	0	n/a	
LT	213	81	40	0	n/a	
NL	1500	29	30	0	n/a	
PL	460	34	29	n/a	n/a	2020
PT	80	0	149	19	n/a	
RO	0	0	630	0	n/a	
SE	2174	0	15	0	n/a	2020
SI	18	0	18	11	n/a	
SK	0	0	259	0	n/a	
RS	16	44	217	n/a	n/a	
IL	157	n/a	n/a	n/a	n/a	
NO	291	123	0	0	n/a	
CH	574	3	485	n/a	n/a	2020
BE			n/a			
DE			n/a			
EL			n/a			
ES			n/a			
IE			n/a			
MT			n/a			
GB			n/a			

Source: National statistics provided by PIN Panellists or the Police in each country.

⁽¹⁾IT - the number of speed cameras refers only to those managed by National Police

Fig. 2 - Number of safety cameras per million inhabitants in 2021 ranked by the number of fixed, mobile and time over distance cameras taken together

	Fixed speed cameras	Time over distance speed cameras	Mobile speed cameras	Empty speed camera boxes	Front photography	Total cameras - empty boxes
SE*	211	0	1	0		212
CH*	67	0.3	56	n/a		123
LT	76	29	14	0		120
LU	78	3	11	0		93
NL	86	2	2	0		90
NO	54	23	0	0		77
LV	52	0	6	0		59
HU*	37	0	19	0		57
FI	49	0	6	142		54
FR*	36	1	14	0		52
AT*	19	1	19	0	9	48
SK	0	0	47	0		47
RS	2	6	31	n/a		40
EE	33	0	6	52		39
RO	0	0	33	0		33
BG	3	0	27	1		30
HR	26	0	0	70		26
PT	8	0	15	2		23
DK	3	0	14	0		18
SI	9	0	9	5		17
IL	17	0	0	0		17
PL	12	1	1	0		14
IT ^{(1)*}	1	3	8	0		11
CY	2	n/a	n/a	n/a		2
CZ*	2	n/a	n/a	n/a		2

* 2020 data

⁽¹⁾IT - the number of speed cameras refers only to those managed by National Police

Table 3 (Table 2) Number of paid speeding tickets

	2010	2018	2019	2020
BG	n/a	417,556	593,893	705,355
CY	72,796	99,497	94,912	62,751
EE	19,271	108,369	142,078	199,054
ES ⁽²⁾	1,717,527	2,255,554	2,554,308	2,050,165
FR ⁽⁴⁾	n/a		77%	n/a
HU	416,663	536,118	596,079	541,035
IE	122,979	115,462	115,717	153,046
IT ⁽³⁾	494,378	309,251	404,270	306,735
LU	19,964	233,402	262,547	221,858
LV	41,422	354,540	383,388	347,769
NL	95.50%	94.50%	94.50%	94.50%
PL ⁽¹⁾	n/a	417,046	694,594	637,336
PT	n/a	295,046	288,904	318,993
SE	n/a	144,016	162,152	214,636
GB	n/a			
AT	n/a			
BE	n/a			
CZ	n/a			
DE	n/a			
DK	n/a			
FI	n/a			
EL	n/a			
HR	n/a			
LT	n/a			
MT	n/a			
RO	n/a			
SI	n/a			
SK	n/a			
RS	n/a			
IL	n/a			
NO	n/a			
CH	n/a			

Source: National statistics provided by PIN Panellists or the Police in each country.

⁽¹⁾PL - number of paid tickets for those coming from speed cameras only.

⁽²⁾ES - data on the number of paid tickets on roads inside urban areas and in the regions of Catalonia and the Basque Country are not available.

⁽³⁾IT - paid tickets issued by national police only.

⁽⁴⁾FR - tickets paid by French vehicles only.

Table 4 (Fig.3a+3b, Table 4 in the text) Total number of roadside alcohol breath tests and proportion of those tested found above the legal limit

	2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		2020	
	Total number of alcohol roadside breath tests	Number of those above the legal limit	Total number of alcohol roadside breath tests	Number of those above the legal limit	Total number of alcohol roadside breath tests	Number of those above the legal limit	Total number of alcohol roadside breath tests	Number of those above the legal limit	Total number of alcohol roadside breath tests	Number of those above the legal limit	Total number of alcohol roadside breath tests	Number of those above the legal limit	Total number of alcohol roadside breath tests	Number of those above the legal limit	Total number of alcohol roadside breath tests	Number of those above the legal limit	Total number of alcohol roadside breath tests	Number of those above the legal limit	Total number of alcohol roadside breath tests	Number of those above the legal limit	Total number of alcohol roadside breath tests	Number of those above the legal limit
AT	1,025,302	37,519	1,418,363	40,234	1,642,790	38,622	1,765,526	35,404	1,817,375	33,418	1,624,279	26,327	1,674,157	27,896	1,720,903	28,109	1,741,992	28,067	1,807,053	30,930	1,222,681	25,705
BE	n/a	56,231	n/a	51,670	n/a	46,718	n/a	48,683	n/a	47,649	n/a	48,100	n/a	51,237	n/a	49,470	n/a	48,760	n/a	51,848	n/a	30,758
BG	n/a	19,198	n/a	17,014	n/a	14,504	n/a	14,687	n/a	14,627	n/a	13,363	n/a	15,742	n/a	14,292	n/a	14,731	n/a	10,831	n/a	9,999
CY	174,584	9,306	172,442	8,479	151,654	11,261	126,506	9,141	118,506	7,926	113,937	7,980	88,827	7,031	102,191	7,323	88,371	7,939	80,644	7,188	43,376	3,911
CZ	n/a	18,283	n/a	17,360	n/a	15,420	n/a	14,042	n/a	14,592	n/a	13,370	n/a	12,184	n/a	11,197	n/a	11,423	n/a	11,044	n/a	9,260
EE	140,096	7,640	n/a	8,562	471,475	8,443	620,309	7,991	752,518	7,887	889,701	7,893	862,915	7,334	674,276	6,449	770,692	6,772	921,527	7,152	751,738	6,669
ES ⁽¹⁾	5,241,403	93,705	6,331,230	113,073	6,442,986	110,152	6,464,439	105,225	6,336,997	98,261	5,741,134	81,198	5,071,265	74,024	5,185,517	74,270	5,509,022	71,959	6,598,675	81,020	3,121,815	35,794
FI	1,078,124	9,147	1,151,413	10,460	926,119	10,311	785,388	9,623	1,519,809	11,051	1,468,383	11,552	1,490,774	10,145	1,452,419	10,032	1,373,164	11,031	937,041	9,416	410,446	9,146
FR	10,892,996	375,487	11,155,304	386,828	10,935,180	352,014	10,517,148	322,694	10,838,743	318,460	10,245,130	293,548	9,862,941	305,239	10,141,631	334,860	9,393,927	320,733	9,033,797	303,385	7,005,056	223,271
EL	1,818,849	38,033	1,762,341	35,006	1,731,670	30,707	1,798,898	30,853	1,811,108	29,597	n/a	29,191	n/a	33,192	n/a	32,964	n/a	33,394	n/a	31,557	n/a	19,096
HR	n/a	35,616	n/a	39,227	n/a	38,193	n/a	39,402	n/a	39,960	n/a	43,000	n/a	44,099	n/a	37,940	n/a	39,250	n/a	32,397	n/a	30,797
HU	1,259,937	44,270	1,173,660	34,137	1,238,563	25,567	1,196,657	23,133	1,222,987	23,634	1,333,497	20,126	1,708,194	25,805	2,363,611	28,754	2,918,362	27,801	2,727,935	25,200	1,687,146	21,569
IE ⁽⁵⁾	n/a																313,042	1,661	314,789	1,474	104,830	452
IT ⁽²⁾	1,502,075	28,882	1,649,465	30,257	1,646,664	26,992	1,651,540	24,472	1,565,631	21,703	1,501,789	21,360	1,430,593	21,179	1,392,777	20,776	1,297,382	20,354	1,288,428	19,942	624,598	10,762
IT ⁽³⁾	n/a												114,104	5,369	127,095	4,503	98,644	4,179	62,249	4,616	40,301	3,346
LU	n/a	1,925	n/a	2,090	n/a	1,768	n/a	1,755	n/a	1,727	n/a	1,555	n/a	1,637	n/a	1,528	n/a	1,575	n/a	1,606	n/a	1,034
LV	n/a	4,093	n/a	4,196	n/a	4,354	n/a	4,312	n/a	4,136	n/a											
LT	130,751	13,690	252,741	12,910	159,507	12,164	163,915	13,064	153,632	13,155	139,963	13,727	n/a	10,897	n/a	10,540	n/a	9,949	n/a	10,195	n/a	9,345
MT	146	68	n/a																			
PL	3,351,776	165,885	5,679,959	183,488	7,383,915	171,020	8,917,980	163,777	15,414,183	141,203	17,701,833	128,996	17,942,523	n/a	17,833,241	n/a	16,468,116	n/a	16,844,530	n/a	6,699,742	n/a
PT	1,125,364	42,775	1,172,445	50,127	1,401,318	55,663	1,559,873	53,593	1,548,621	45,603	1,577,907	47,794	1,638,020	44,008	1,683,237	65,724	1,681,992	37,513	1,818,700	33,826	1,126,495	181,999
RO	n/a	37,219	n/a	36,399	n/a	16,009	1,500,917	15,150	1,462,415	23,615	1,435,020	26,505	n/a	14,475	n/a	14,719	n/a	16,084	n/a	23,374	n/a	22,585
SE	2,680,991	16,854	2,441,583	16,676	2,463,732	14,856	2,248,915	13,247	2,012,694	12,744	1,428,518	12,565	1,201,336	11,552	1,165,174	11,298	1,178,278	11,188	1,274,730	11,558	362,748	8,558
SI	408,447	19,127	388,019	17,575	330,318	12,920	379,721	14,232	284,204	13,883	322,858	11,653	293,931	10,887	395,482	13,860	352,929	11,821	423,247	12,994	361,220	11,674
SK	n/a	4,460	n/a	4,015	n/a	3,170	n/a	2,882	n/a	2,577	n/a	2,690	n/a	2,444	n/a	2,285	n/a	2,533	n/a	2,516	n/a	2,236
GB ⁽⁴⁾	736,846	84,436	685,992	80,761	686,346	76,179	676,353	70,675	606,241	65,585	520,219	60,019	463,148	58,996	326,221	50,999	336,373	54,961	302,281	53,695	n/a	
RS	n/a	48,339	n/a	51,538	n/a	55,585	n/a	50,533	n/a	51,158	n/a	57,926	n/a									
IL	n/a	9,599	n/a	9,033	n/a	8,785	n/a	10,169	n/a	12,027	n/a	9,015	n/a	8,742	n/a	8,871	n/a	9,699	n/a	9,893	n/a	5,962
NO	1,783,702	4,318	1,760,378	5,920	1,739,093	6,326	1,552,851	6,242	1,581,503	6,448	1,452,174	7,082	1,346,037	7,582	1,111,011	6,939	936,233	6,367	959,288	7,565	341,998	8,875
DE	n/a																					
DK	n/a																					
NL	n/a																					
CH	n/a																					

Source: National statistics provided by PIN Panellists

⁽¹⁾ES - checks on roads inside urban areas and in the region of the Basque Country are not available. Data for checks in Catalonia include urban areas.

⁽²⁾IT - alcohol road side breath tests by national police and Carabinieri only. The number of tests done by local Police operating in cities is not available.

⁽³⁾IT - local police of main cities

⁽⁴⁾GB - number of alcohol roadside breath tests and population data for England and Wales only. The figure for the number found to be above the legal limit includes those who refused to take the breath test. Due to changes in reporting system, data prior to 2011 are not directly comparable with subsequent years.

⁽⁵⁾IE - data refers to breath tests performed at Mandatory intoxicant Testing Checkpoints

Fig.3a - Average annual change in the number of alcohol roadside breath checks over the period 2010-2019

PL	19%
HU	12%
EE*	7%
PT	5%
AT	3%
FI	2%
SI	0%
ES ⁽¹⁾	-1%
FR	-2%
IT ⁽²⁾	-3%
NO	-8%
CY	-9%
SE	-11%
GB ^{(3)**}	-12%

*2012-2019

**2011-2019

⁽¹⁾ES - data on the number of alcohol roadside breath checks on roads inside urban areas and in the regions of Catalonia and the Basque Country are not available

⁽²⁾IT - alcohol roadside breath checks by national police

⁽³⁾GB - number of alcohol roadside breath tests for England and Wales only. The figure for the number found to be above the legal limit includes those who refused to take the breath test.

Fig. 3b - Relative change in the number of alcohol roadside breath checks per thousand population between 2019 and 2020

SI	-15%
EE	-19%
FR	-23%
AT	-33%
PT	-38%
HU	-38%
CY	-47%
IT ⁽¹⁾	-51%
ES ⁽²⁾	-53%
FI	-56%
PL	-61%
NO	-65%
SE	-72%

⁽¹⁾IT - alcohol roadside breath checks by national police

⁽²⁾ES - data on the number of alcohol roadside breath checks on roads inside urban areas and in the regions of Catalonia and the Basque Country are not available

Table 5 (Fig.4a+4b) Road deaths attributed to drink driving and the difference between the average annual percentage change in the number of road deaths attributed to alcohol and the corresponding reduction for other road deaths

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Difference between the average annual % change in the number of road deaths attributed to alcohol and the corresponding reduction for other road deaths (2010–2019)	Difference between the relative annual % change in the number of road deaths attributed to alcohol and the corresponding reduction for other road deaths (2019–2020)
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Fig.4a	Fig.4b
AT	32	51	39	31	32	28	22	33	33	32	17	0.31%	-32.03%
BE	41	45	48	31	34	41	40	37	29	38	20	1.81%	-23.68%
BG	25	28	28	18	13	10	6	4	6	6	4	-19.72%	-7.13%
CY	26	25	19	9	13	12	8	11	15	6	8	-12.94%	46.38%
CZ	108	100	50	56	68	72	58	53	71	60	57	-1.60%	12.41%
DE	342	400	338	314	260	256	225	231	244	228	156	-4.00%	-22.11%
DK	64	53	24	41	37	27	30	36	32	38	29	-3.28%	-1.95%
EE	11	20	16	24	18	16	8	13	13	13	13	3.04%	-20.51%
ES ⁽¹⁾	265	230	216	161	161	184	228	254	195	235	191	2.54%	3.97%
FI	77	83	47	66	56	69	71	57	46	50	58	-2.19%	14.76%
FR	1,230	1,220	1,130	952	958	1,057	1,009	1,035	985	1,052	804	0.24%	-2.82%
EL	88	101	100	94	76	71	98	47	36	34	n/a	-5.32%	
HR	152	151	147	96	85	115	99	92	72	68	66	-6.47%	22.39%
HU	61	57	53	49	47	80	77	69	65	63	67	4.09%	32.69%
IE ⁽²⁾	96	66	58	45	53	48	49	24		n/a			-6.00%
LU	11	12	9	10	6	10	5	5	4	10	3	-5.16%	-161.67%
LV	25	27	47	30	51	26	23	24	20	25	13	0.36%	-65.76%
LT	32	24	41	32	49	17	16	16	22	22	20	-0.34%	-3.60%
NL	18	14	16	19	12	9	9	5	18	15	8	-5.30%	
PL	455	559	584	523	470	407	383	341	370	326	327	-1.86%	16.53%
PT ⁽⁴⁾	242	228	193	168	140	142	173	170	172	182	126	1.47%	-13.88%
RO	194	164	224	166	181	174	160	148	118	114	66	-4.11%	-32.39%
SE	47	67	68	50	55	61	65	58	57	37	42	-0.80%	25.47%
SI	49	35	43	38	25	37	41	32	22	33	27	-0.87%	5.01%
SK	26	37	32	23	38	35	40	29	31	38	30	6.31%	-14.77%
GB	240	240	230	240	240	200	230	250	240	230	n/a	0.31%	
RS ⁽⁵⁾	43	44	60	77	64	51	65	103	93	92	92	13.21%	9.50%
IL	14	7	7	8	10	11	11	8	8	9	9	-0.85%	14.45%
NO	40	31	34	28	29	22	29	20	40	20	24	3.50%	41.59%
CH	63	53	57	48	29	38	37	38	30	25	28	-3.37%	-10.84%
IT ⁽³⁾						n/a							
MT						n/a							
UK						n/a							

Source: national statistics provided by PIN Panellists for each country using each country's own method of identifying alcohol related deaths. See Table 7 Country definition of road deaths attributed to alcohol

⁽¹⁾ES - from 2010 to 2015 figures refer to killed car drivers who tested more than 0.3 g/l in post-mortem blood alcohol tests. From 2016 to 2020, the methodology used is the following: figures refer to alcohol-related road deaths and cover 65% of fatal accidents in 2016, 68% in 2017, 65% in 2018, 67% in 2019 and 61% in 2020. From 2010 to 2020, data from Catalonia and Basque Country are not included.

⁽²⁾IE - data collection methodology changed in 2013, therefore prior data are not comparable.

⁽³⁾IT - Carabinieri and the National Police, which detect about one third of all road collisions with injuries, have made available, on a trial basis for 2015, the data on driving under the influence alcohol. These data show that were 5,876 traffic accidents for which at least one of drivers of vehicles involved was under the influence of a total of 58,981. The 10.0% of incidents detected by the Police and the Traffic Police in 2015, is thus alcohol-related.

⁽⁴⁾PT - data from forensic postmortem test of drivers, passengers and pedestrians.

⁽⁵⁾RS - data collection methodology changed in 2016. Serbia is working to improve alcohol-related fatal collision data collection according to the EU guidelines on the Common Accident and Injury Database (CaDas)

Table 6 National definition of deaths attributed to drink driving

SafetyNet recommended definition: any death occurring as a result of road accident in which any active participant was found with blood alcohol level above the legal limit

National definition of deaths attributed to drink driving if different to the SafetyNet recommended definition	
AT	SafetyNet recommended definition. However killed and unconscious road users are not tested for alcohol unless the prosecutor requires it.
BE	SafetyNet recommended definition.
BG	Deaths occurring as a result of a road traffic accident in which the blamed for the traffic accident was found with blood alcohol level above 0.5g/l.
CY	SafetyNet recommended definition.
CZ	SafetyNet recommended definition.
DE	SafetyNet recommended definition. However, drivers killed on the spot might not be tested.
DK	SafetyNet recommended definition.
EE	Deaths occurring as a result of a road collision in which at least one motorvehicle driver was found with blood alcohol level above 0.2g/l.
ES	Killed car drivers who tested more than 0.3g/l in post-mortem blood alcohol tests.
FI	A person who has died within 30 days from an alcohol related accident (excluding deaths from acute fits of illness). Alcohol related accident = An accident in which the driver of the vehicle of some party or a pedestrian has been proven (by a blood test or breathalyser reading exceeding 0.5 per mille) or is suspected on strong grounds to have been under the influence of alcohol at the time of the accident.
FR	SafetyNet recommended definition
EL	Deaths in collisions where a driver was found with blood alcohol level above the legal limit. In practice, however, the Police is not systematically testing drivers for alcohol.
HR	SafetyNet recommended definition. However, drivers or other killed persons on the spot might not be tested.
HU	Killed car drivers who tested positive in post-mortem blood alcohol tests. Drivers are only tested if they are assumed to be responsible for the collision.
IE	Fatalities with a positive toxicology for alcohol (i.e. a Blood Alcohol Concentration >20mg alcohol per 100ml blood, or equivalent in urine).
IT	SafetyNet recommended definition. However the number of alcohol related deaths is not disseminated for two main reasons: deaths are attributed to drink driving only when alcohol is proved and considered by the Police officer as the main contributory factor of the fatal or serious collision; drivers or other killed persons on the spot might not be tested.
LU	From 2001 to 2009: killed persons of accidents where the police suspected the presence of alcohol. As from 2010: SafetyNet recommended definition.
LV	Deaths occurring as a result of road accident in which at least one driver (excluding moped riders and cyclists) was found with blood alcohol level above the legal limit (0.2g/l for novice drivers, 0.5g/l for all other drivers)
LT	Deaths occurring as a result of a road collision in which at least one driver was found with blood alcohol level above the legal limit (0.2g/l for novice and professional drivers, 0.4g/l for all other drivers)
MT	n/a
NL	Drivers killed on the spot might not be tested. As from 2011 onward Police no longer provides this data. Since May 2018 this data is banned completely due to GDPR. Next to that Netherlands does not have obductions mandatory for road traffic fatalities
PL	SafetyNet recommended definition.
PT	SafetyNet recommended definition.
RO	Killed people tested for alcohol. Testing might only occur when the Police suspects the presence of alcohol (legal limit is 0.0g/l).
SE	Killed road users who tested positive (BAC > 0.2) in post-mortem blood alcohol tests.
SI	Deaths occurring as a result of a road traffic accident in which a causer of the traffic accident was found with blood alcohol level above 0.5g/l
SK	Killed people in road accidents caused by road users with blood alcohol above the legal limit.
UK	n/a
GB	A reported incident on a public road in which someone is killed or injured, where at least one of the motor vehicle drivers or riders involved met one of these criteria: a) failed a roadside breath test by registering above 35 micrograms of alcohol per 100ml of breath (in England and Wales) or 22 micrograms (in Scotland). b) refused to give a breath test specimen when requested by the police (other than when incapable of doing so for medical reasons). c) died, within 12 hours of the accident, and was subsequently found to have more than 80 milligrams of alcohol per 100ml of blood (in England and Wales) or 50 milligrams (in Scotland).
CH	SafetyNet recommended definition.
IL	SafetyNet recommended definition.
NO	Any death occurring in collisions involving a road user under the influence of alcohol or drug.
RS	Before 2016, information on whether road users involved in collisions were under the influence of alcohol was not collected. Police only had to indicate whether alcohol was the 'cause' of the collision. Since 2016, Serbia is working to improve data collection according to CaDas.

Source: Definition provided by the PIN Panellists in each country.

Table 7 (Fig.5+6) Seatbelt wearing rates in front and rear seats 2010-2020

	Front seat			Back seat		
	2010	2020		2010	2020	
AT	83%	96%		66%	84%	
BE	86%	92%		n/a	86%	
CY	86%	n/a		n/a		
CZ	97%	95%		69%	88%	
DE	98%	98%		97%	99%	
DK	92%	97%		71%	89%	
EE	93%	99%		64%	87%	
ES	88%	n/a		76%	n/a	
FI	92%	96%		84%	89%	
FR	99%	98%		85%	92%	
EL	70%	n/a		19%	n/a	
HR	64%	81%	2015–2021	16%	36%	2015–2021
HU	82%	92%	2010–2021	0%	58%	2010–2021
IE	94%	94%	2011–2018, adult road users observed in cars, light goods vehicles and heavy goods vehicles.	90%	89%	2011–2018, adult road users observed in cars, light goods vehicles and heavy goods vehicles.
IT	67%	63%		n/a	11%	
LV	85%	n/a		40%	n/a	
NL	96%	97%		82%	96%	
PL	81%	98%	2008–2020	79%	85%	2008–2020
PT	96%	n/a		77%	n/a	
SE	96%	98%		88%	92%	
SI	92%	95%		50%	78%	
SK	81%	n/a		n/a		
GB	95%	n/a		89%	n/a	
RS	68%	84%	2013–2020	3%	21%	2013–2020
IL	90%	92%	2016–2019	70%	71%	2016–2019
NO	94%	97%	2010–2019, rural roads	n/a		
CH	89%	97%	2010–2021	74%	90%	2010–2021
BG	n/a			n/a		
LU	n/a			n/a		
LT	n/a			n/a		
MT	n/a			n/a		
RO	n/a			n/a		

Source: National statistics provided by PIN Panellists

Fig. 5 - Seatbelt wearing rates in front seats of cars and vans in 2020 and 2010 for comparison

	Front seat	
	2010	2020
IT	67%	63%
HR***	64%	81%
RS*****	68%	84%
HU**	82%	92%
BE	86%	92%
IL*****	90%	92%
IE*	94%	94%
CZ	97%	95%
SI	92%	95%
AT	83%	96%
FI	92%	96%
CH**	89%	97%
NL	96%	97%
DK	92%	97%
NO****	94%	97%
PL*****	81%	98%
DE	98%	98%
FR	99%	98%
SE	96%	98%
EE	93%	99%

*2011 and 2018, adult road users observed in cars, light goods vehicles and heavy goods vehicles.

**2010 and 2021

***2015 and 2021

****2010 and 2019

*****2008–2020

*****2016–2019

*****2013–2020

Fig. 6 - Seatbelt wearing rates in rear seats of cars and vans in 2020 and 2010 for comparison

	Front seat	
	2010	2020
IT	n/a	11%
RS*****	3%	21%
HR***	16%	36%
HU**	n/a	58%
IL****	70%	71%
SI	50%	78%
AT	66%	84%
PL*****	79%	85%
BE	n/a	86%
EE	64%	87%
CZ	69%	88%
DK	71%	89%
FI	84%	89%
IE*	90%	89%
CH**	74%	90%
SE	88%	92%
FR	85%	92%
NL	82%	96%
DE	97%	99%

*2011 and 2018, adult road users observed in cars, light goods vehicles and heavy goods vehicles.

**2010 and 2021

***2015 and 2021

****2016 and 2019

*****2008–2020

*****2013–2020

Table 8 (Fig.7a+7b, Table 5 in the text) Total number of seatbelt tickets

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
AT	136,200	147,016	143,613	131,408	129,118	103,214	98,414	102,039	102,941	97,949	78,765
BE	123,564	112,500	86,109	99,768	102,552	79,104	74,109	60,049	53,668	52,655	43,086
BG	83,094	81,966	73,982	67,724	64,907	49,664	65944	62,280	64116	64224	59038
CY	20,657	20,865	25,315	13,120	10,813	10,920	14,925	15,337	15,169	18,566	8,829
CZ ⁽⁵⁾	71,386	70,990	60,776	56,215	56,554	68,141	53,629	47,094	41,663	37,068	29,026
DK	43,316	42,031	38,121	38,639	32,465	27,330	18,422	12,379	13,525	13,080	13,112
EE	18,477	17,167	14,750	10,269	8,439	6,626	5047	4304	3192	3090	2469
ES ⁽¹⁾	139,802	192,652	185,910	170,560	146,083	115,300	99,160	90,846	96,995	115,337	94,633
FI	24,953	27,643	21,375	18,371	16,549	16,360	14,187	9,158	8,925	5,917	5,647
FR	280,803	268,578	260,969	229,578	189,426	171,410	154,829	155,583	152,074	155,925	129,683
EL	49,703	37,120	33,722	35,478	34,526	29,611	34,831	31,510	33,380	34,594	30,174
HR	76,475	82,044	76,385	81,669	91,467	96,403	87,613	80,560	85,464	70,706	72,704
HU	n/a			64,056	67,151	50,942	57,993	65,073	53,472	57,905	60,185
IE	17,383	15,723	13,512	12,246	12,689	10,841	9,816	11,034	11,637	11,375	8,780
IT ⁽²⁾	184,138	170,552	218,524	176,554	174,397	189,106	196,358	202,993	202,941	257,234	206,257
LU	3,159	3,077	2,185	2,835	2,893	2,399	1,988	1,664	2,107	1,942	1,485
LV	28,425	33,916	29,708	28,375	25,289	25,043	25,198	17,129	14,404	15,165	8,758
LT	36,457	23,864	22,955	23,449	21,182	21,727	20828	19374	21363	17905	19583
NL	187,612	108,093	65,414	72,946	62,521	20,400	34,972	36,918	34,239	43,127	39,273
PL	396,232	371,388	373,247	382,953	433,082	404,917	335,462	327,889	273,002	259,142	184,162
PT	15,764	16,182	15,107	13,876	12,164	15,027	13622	24912	26846	26107	22388
RO	590,038	565,467	459,333	589,042	485,763	467,950	465,878	416,721	398,258	395,375	295,279
SE ⁽³⁾	37,739	33,778	28,242	25,004	20,142	14,390	10,046	6,866	7,105	7,792	8,605
SI	63,990	52,970	45,413	46,198	49,023	40,468	33,601	49,026	34,531	40,283	37,260
SK	13,223	8,661	10,836	13,023	16,595	15,781	15790	17186	19933	16018	12332
GB ⁽⁴⁾	176,403	140,900	116,727	75,348	35,572	29,360	19,629	18,467	21,577	39,771	n/a
RS	99,287	91,291	91,939	115,096	127,632	178,771	176,644	176,055	155,172	281,999	204,340
IL	265,551	211,234	49,113	61,177	64,765	88,373	87,379	109,872	126,774	138,487	110,268
NO	30,043	25,767	21,906	19,103	16,917	14,161	14504	10594	4252	2087	2110
DE	n/a										
MT	n/a										
CH	n/a										

Source: national statistics provided by PIN Panellists

⁽¹⁾ES – number of tickets following checks on roads inside urban areas and in the regions of Catalonia and the Basque Country is not available

⁽²⁾IT – tickets following checks by national police, Carabinieri and police in main cities (provincial capitals).

⁽³⁾SE – tickets for failure to use a seat belt use on front seat passengers only

⁽⁴⁾GB – data for tickets following checks in England and Wales only.

⁽⁵⁾CZ – data cover detected seatbelt offences and not the number of tickets issued.

Fig. 7a - Average annual change (in %) in the number of tickets for non-use of seatbelts per thousand population over the period 2010-2019

RS	12%
PT	7%
SK	6%
IT ⁽¹⁾	2%
HR	1%
HU**	-2%
EL	-2%
BG	-3%
CY	-4%
LT	-4%
RO	-4%
PL	-4%
IL	-4%
SI	-5%
IE	-5%
AT	-6%
ES ⁽²⁾	-7%
LV	-8%
LU	-8%
FR	-8%
BE	-10%
FI	-15%
DK	-15%
NL	-16%
CZ ⁽³⁾	-7%
EE	-20%
SE ⁽⁴⁾	-20%
GB ^{(5)*}	-21%
NO	-23%

Fig. 7a

⁽¹⁾IT – tickets following checks by national police, Carabinieri and police in main cities (provincial capitals).

⁽²⁾ES – number of tickets following checks on roads inside urban areas and in the regions of Catalonia and the Basque Country is not available

⁽³⁾CZ – data cover detected seatbelt offences and not the number of tickets issued.

⁽⁴⁾SE – tickets for failure to use a seat belt use on front seat passengers only

⁽⁵⁾GB – data for tickets following checks in England and Wales only.

*2011–2019

**2013–2019

Fig. 7b - Relative change in the number of tickets for non-use of seatbelts per thousand population between 2019 and 2020

SE ⁽¹⁾	9%
LT	9%
HU	4%
HR	3%
NO	0%
DK	0%
FI	-5%
BG	-7%
SI	-8%
NL	-10%
EL	-13%
PT	-14%
FR	-17%
ES ⁽²⁾	-19%
BE	-19%
IT ⁽³⁾	-19%
AT	-20%
EE	-20%
IL	-22%
CZ	-22%
SK	-23%
IE	-24%
RO	-25%
LU	-25%
RS	-27%
PL	-29%
LV	-42%
CY	-53%

Fig. 7b

⁽¹⁾SE – tickets for failure to use a seat belt use on front seat passengers only

⁽²⁾ES – number of tickets following checks on roads inside urban areas and in the regions of Catalonia and the Basque Country is not available

⁽³⁾IT – tickets following checks by national police, Carabinieri and police in main cities (provincial capitals).

Table 9 (Fig.8a+8b, Table 6 in the text) Total number of tickets for illegal use of a mobile phone

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
AT	128,221	149,081	148,594	137,554	130,621	109,028	105,589	113,770	115,470	123,888	121,211	
BE	124,632	132,257	120,008	118,677	121,411	108,851	108,721	100,422	98,829	105,225	107,686	
BG	22,694	19,158	15,684	18,129	15,847	7,531	10,041	9,958	13,070	13,452	12,554	
CY	22,807	25,658	25,253	12,218	9,735	10,205	14,116	14,982	15,264	14,100	7,945	
CZ	n/a									31,478	29,031	
DE	n/a										413,277	
DK	37,922	42,725	44,170	48,607	44,726	41,543	28,079	20,113	22,435	24,585	28,377	
EE	n/a	1,094	2,356	1,323	812	1,446	1,388	2,527	3,745	n/a		
ES ⁽¹⁾	114,602	129,756	134,236	138,540	125,511	102,871	89,486	88,281	90,947	97,725	96,421	
FI	8,167	8,731	7,915	6,610	5,801	7,424	8,032	6,270	7,155	4,954	5,552	
FR	507,342	509,372	487,822	438,814	374,525	343,829	328,059	380,105	385,829	393,343	358,858	
EL	18,603	18,603	18,753	24,121	23,459	19,730	25,381	23,799	18,224	15,746	13,528	
HR	19,850	22,137	24,504	31,772	40,425	38,988	36,667	37,388	40,971	43,240	45,066	
HU	n/a			37,581	41,438	33,662	32,305	32,020	34,180	24,440	26,138	
IE	34,637	33,422	30,897	28,815	32,337	28,777	28,122	28,402	31,174	29,107	24,478	
IT ⁽²⁾	194,151	211,433	189,445	154,511	142,715	148,670	146,053	134,150	125,994	149,374	112,809	
LU	2,767	3,140	2,353	2,651	3,119	2,835	3,100	3,098	3,509	3,475	2,952	
LV	2,212	2,888	2,787	2,778	2,588	3,575	3,865	3,119	3,457	4,943	4,075	
LT	15,529	19,723	27,872	23,790	20,581	20,691	17,583	18,375	20,028	19,394	34,900	
NL	140,437	100,574	63,551	69,570	67,351	33,084	59,816	74,563	80,425	121,364	168,034	
PL	48,937	58,179	71,101	89,812	120,588	119,548	n/a	n/a	71,593	73,615	53,858	
PT	29,713	40,765	42,698	37,851	32,419	36,588	31,181	36,774	39,483	35,158	28,716	
RO	65,051	68,015	65,996	84,606	78,586	72,432	76,494	64,348	69,754	68,533	50,463	
SE	n/a									1,777	9,119	14,855
SI	19,719	18,400	7,240	19,913	23,312	20,338	14,519	29,569	22,727	31,406	36,751	
SK	n/a	4,112	6,569	8,872	11,634	19,745	18,219	22,753	26,121	21,394	14,035	
GB ⁽³⁾	124,728	123,137	92,665	52,364	29,749	88,695	79,929	52,993	38,545	28,321	n/a	
RS	21,546	20,950	21,959	25,395	30,919	34,130	35,282	35,909	46,071	59,448	65,091	
IL	107,208	104,178	100,262	71,393	57,752	61,751	82,214	108,471	124,891	168,170	154,258	
NO	20,848	19,937	19,951	18,243	17,287	17,680	19,821	18,141	16,950	16,365	17,375	
CH	n/a											
MT	n/a											

Source: national statistics provided by PIN Panellists

⁽¹⁾ES - number of tickets for illegal use of mobile phone following checks on roads inside urban areas and in the regions of Catalonia and the Basque Country is not available.

⁽²⁾IT - tickets following checks by national police, Carabinieri and police in main cities (provincial capitals).

⁽³⁾GB - number of tickets for illegal use of mobile phone following checks in England and Wales only. Due to changes in reporting system, data prior to 2011 are not directly comparable with subsequent years.

Fig.8a - Average annual change (in %) in the number of tickets for illegal use of mobile phone per thousand population over the period 2010–2019

SK***	24%
EE*	12%
RS	12%
HR	9%
LV	8%
SI	7%
IL	2%
LT	1%
RO	1%
LU	0%
PT	0%
EL	0%
NL	-2%
IE	-2%
NO	-3%
AT	-3%
BE	-3%
FI	-4%
FR	-4%
ES ⁽¹⁾	-4%
IT ⁽²⁾	-5%
HU**	-6%
CY	-6%
BG	-7%
DK	-9%
GB ⁽³⁾ ***	-12%

Fig. 8b - Relative change in the number of tickets for illegal use of mobile phone per thousand population between 2019 and 2020

LT	80%
SE	61%
NL	37%
SI	16%
DK	15%
FI	12%
RS	10%
HU	7%
NO	5%
HR	5%
BE	2%
ES ⁽¹⁾	-2%
AT	-3%
BG	-6%
FR	-9%
IL	-10%
EL	-14%
LU	-17%
IE	-17%
PT	-18%
IT ⁽²⁾	-24%
RO	-26%
SK	-34%
CY	-44%
LV	-55%

*2011–2018

**2013–2019

*2011–2019

⁽¹⁾ES – number of tickets following checks on roads inside urban areas and in the regions of Catalonia and the Basque Country is not available

⁽²⁾IT – tickets following checks by national police, Carabinieri and police in main cities (provincial capitals).

⁽³⁾GB – data for tickets following checks in England and Wales only.

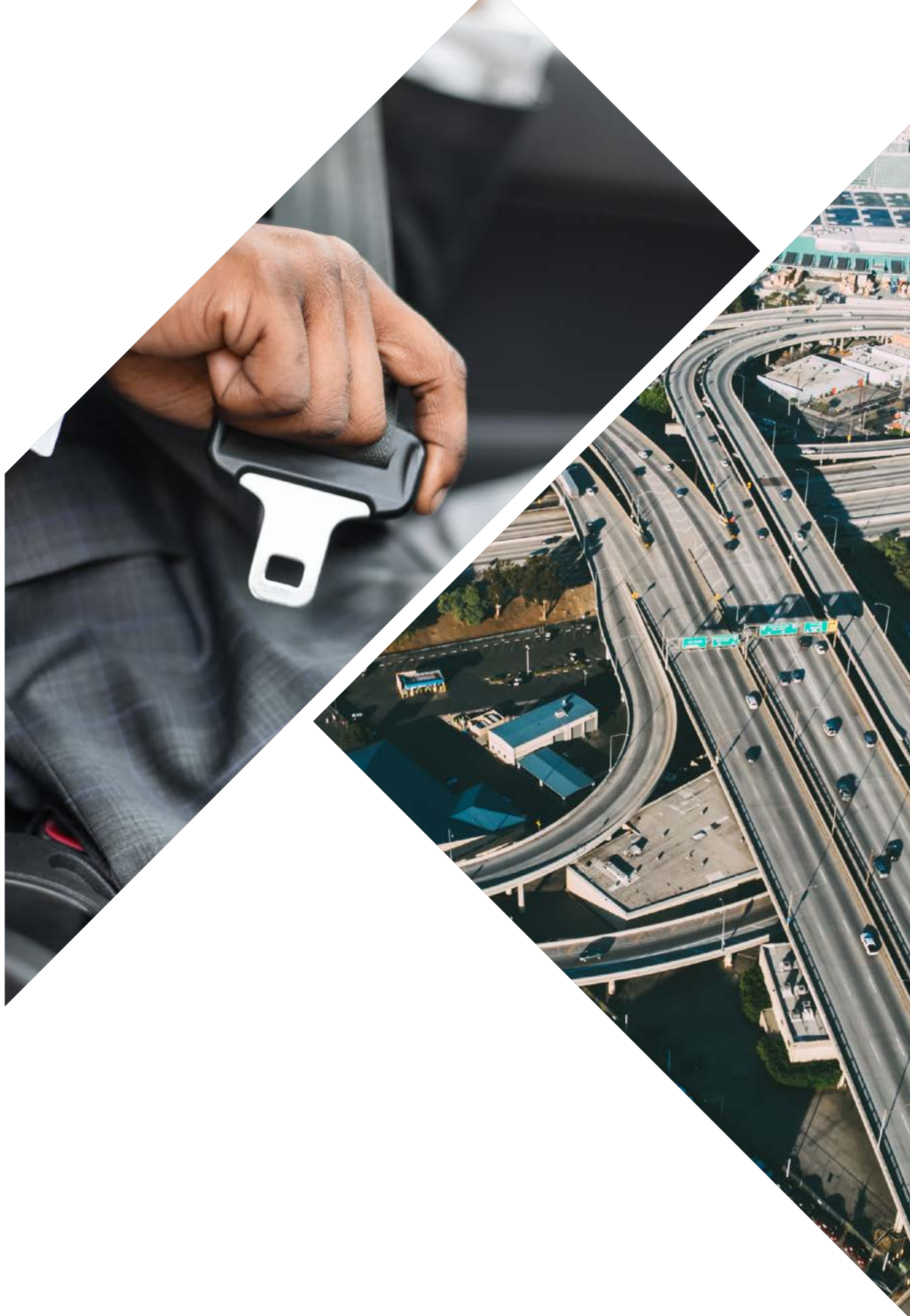
Table 10 (Table 7 in the text) Total number of offences listed in the Cross Border Enforcement Directive 2015/413 detected, followed up and paid

	2015			2020		
	Number of automatically-detected offences committed by non-residents	Number of followed up offences	Number of offences that were paid	Number of automatically-detected offences committed by non-residents	Number of followed up offences	Number of offences that were paid
AT*	1,500,000	1,500,000	65%	1,200,000	1,200,000	65%
EE	n/a				22,489	13,481
ES	272,098	98,125	47,405	128,610	115,596	74,939
FR	3,023,349	1,806,147	1,228,575	1,789,215	1,806,076	939,738
HU	64,755	64,755	63,158	115,241	115,241	51,970
IT ⁽¹⁾ *	10,511	26,307	10,157	10,857	6,146	700
LV	1,555	1,555	969	81,306	81,306	42,380
LT	74,822	6,219	n/a			
NL	595,630	573,211	n/a	870,000	n/a	81%
PL*	133,057	15,800	2,820	111,830	n/a	n/a
PT	34,839	24,277	23,641	46,720	17,567	15,149
SK	n/a				7,441	7,441
BE				n/a		
BG				n/a		
CY				n/a		
CZ				n/a		
DE				n/a		
DK				n/a		
FI				n/a		
EL				n/a		
HR				n/a		
IE				n/a		
LU				n/a		
MT				n/a		
RO				n/a		
SE				n/a		
SI				n/a		
GB				n/a		
RS				n/a		
IL				n/a		
NO				n/a		
CH				n/a		

Source: national statistics provided by PIN Panellists

⁽¹⁾IT - year 2010–2015 all offences listed in the Cross Border Enforcement Directive (CBE) 2015/413 committed by non-resident offender - Year 2015–2020 offences automatically detected (speed only) committed by EU resident offender

*2016–2020



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