

Ranking EU progress on road safety

Classificazione dei progressi dell'UE in materia di sicurezza stradale

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This article provides an overview of the progress in reducing the number of road deaths in 32 countries, including all EU Member States. In 2010, the European Union renewed its commitment to improve road safety by setting a target of reducing road deaths by 50% by 2020, compared to 2010 levels. The article shows that since 2010, EU countries achieved an overall reduction in road deaths of 20.7% that is far less than 42.5% needed to be on track with the target. Road safety levels in the EU still differ by a factor of three between the groups of countries with the highest and the lowest road mortality. This article also provides an overview of the recently adopted EU road safety legislation and the EU Road safety policy framework 2021-2030 and delivers policy recommendations to the EU institutions and Member States on the measures that can accelerate the progress in the short and long term.

Key words: Roads safety targets, Road deaths, EU road safety policies

Questo articolo fornisce una panoramica dei progressi ottenuti nel ridurre il numero dei morti sulle strade in 32 nazioni, inclusi tutti i paesi membri dell'Unione Europea. Nel 2010, l'Unione Europea rinnovò il suo impegno nel migliorare la sicurezza stradale adottando l'obiettivo di dimezzare i morti sulle strade entro il 2020, rispetto ai dati del 2010. L'articolo dimostra che, dal 2010, i paesi membri hanno ottenuto una riduzione complessiva delle vittime stradali pari al 20,7%, ben lontano dal 42,5% necessario per raggiungere l'obiettivo UE. I livelli di sicurezza stradale nell'Unione Europea sono ancora molto contrastanti: alcune nazioni registrano un tasso di mortalità tre volte più alto rispetto a quelle con il tasso più basso. L'articolo offre una visione d'insieme delle normative UE in materia di sicurezza stradale e il quadro strategico europeo della sicurezza stradale per il periodo 2021-2030. Sono inoltre incluse raccomandazioni politiche alle istituzioni europee e ai paesi membri sulle misure che permetterebbero di accelerare i progressi nel breve e lungo termine.

Parole chiave: Obiettivo di sicurezza stradale, Morti sulle strade, Politiche UE di sicurezza stradale

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Description

In 2010, the European Union renewed its commitment to improve road safety by setting a target of reducing road deaths by 50% by 2020, compared to 2010 levels. This target followed an earlier target set in 2001 to halve the number of road deaths by 2010. A new target to halve road deaths and the first target to halve the number of serious road traffic injuries by 2030 compared to 2020 levels was announced by the European Commission (EC) on 17 May 2018. Since 2010, EU countries achieved an overall reduction in road deaths of 20.7% that is far less than 42.5% needed to be on track with the target.

In summer 2019, the EC presented an EU Road Safety Policy Framework for 2021-2030 with further developed proposals. The new strategy includes Key Performance Indicators (KPIs) which will form the basis for monitoring progress in the joint road safety work at EU, Member State, regional and local level.

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

The new General Safety Regulation comprises of a number of updated minimum safety requirements for new vehicles that will come into force starting in 2022. The legislation mandates a range of new vehicle safety features such as Automated Emergency Braking (AEB) and overrideable Intelligent Speed Assistance (ISA) as standard on all new vehicles sold on the EU market. New heavy goods vehicles will have to comply with direct vision requirements as of 2028. Passive safety is also improved by extending the crash test zone to include the windscreen between the A-pillars for better pedestrian and cyclist protection. TRL, the UK transport research laboratory, estimated in a study for the European Commission that the package of proposed vehicle safety measures could prevent around 25,000 deaths and 140,000 people seriously injured across all vehicle categories within 15 years.

As of 2021, the new minimum infrastructure safety management procedures will have to be extended beyond the TEN-T network and will apply to all motorways, all “primary roads” and all non-urban roads that receive EU funding. The proposed measures were estimated to save up to 3200 lives and prevent more than 20,000 serious injuries over the period 2020-2030.

Methodological note

The EU has set a target to halve the number of road deaths by 2020, based on their level in 2010. In this paper, we track progress in 32 countries, including all EU Member States, against this target using, as main indicators, the relative changes in the numbers of people killed on the road be-

tween 2017 and 2018 (Fig. 1) and between 2010 and 2018 (Fig. 2).

A person killed in traffic is someone who was recorded as dying immediately or within 30 days from injuries sustained in a collision on a public road. We also use road mortality expressed as the number of road deaths per million inhabitants - as an indicator of the current level of road safety in each country. Additionally, the risk expressed as the number of road deaths per billion km travelled is presented in countries where the data are available however, countries use different methodologies to collect data on veh/km driven by motorised vehicles.

The data used are from national statistics supplied by the national experts (PIN panellist) in each country. The numbers of road deaths in 2018 in Austria, Belgium, Denmark, Finland, Germany, Greece, Ireland, Italy, Portugal, Spain, Israel, Norway and Serbia are provisional as final figures were not yet available at the time of writing this paper.

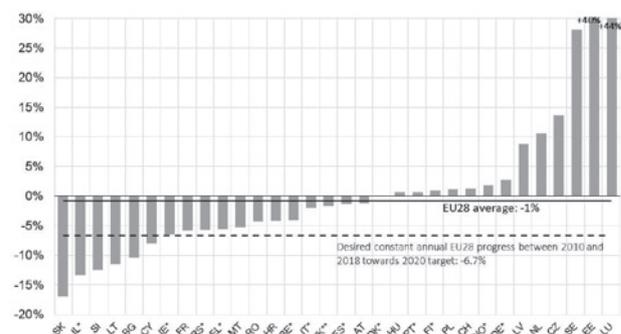


Figure 1.

*Relative change in road deaths between 2017 and 2018. *National provisional estimates used for 2018. **UK data for 2018 are the provisional total for Great Britain for the year ending June 2018 combined with the total for Northern Ireland for the calendar year 2018. The annual number of deaths in LU and MT are particularly small and, therefore, subject to substantial annual fluctuation. Annual numbers of deaths in CY and EE are also relatively small and, therefore, may be subject to annual fluctuations.*

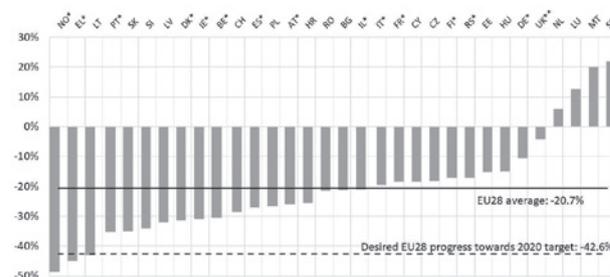


Figure 2.

*Relative change in road deaths between 2010 and 2018. *National provisional estimates used for 2018. **UK data for 2018 are the provisional total for Great Britain for the year ending June 2018 combined with the total for Northern Ireland for the calendar year 2018.*

Annual numbers of deaths in Luxembourg and Malta are particularly small and are, therefore, subject to substantial annual fluctuation. Annual numbers of deaths in Cyprus and Estonia are also relatively small and, therefore, may be subject to considerable annual fluctuation. The UK figure for 2018 is the provisional total for Great Britain for the year ending June 2018 together with Northern Ireland's total for the calendar year 2018. The full dataset used in this paper is available at www.etsc.eu/13th.

Population figures were retrieved from the EUROSTAT database.

Only a 1% decrease in the number of road deaths in the EU in 2018

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

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

The largest increase was registered in Luxembourg with 44%¹, Estonia with 40%, Sweden with 28% and the Czech Republic with 14%.

Only two EU countries on track to reach the 2020 target

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

Five years of slow progress

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

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

The EU28 reduced the number of road deaths by 21% between 2010 and 2018 (Fig. 4). The EU15² reduced the num-

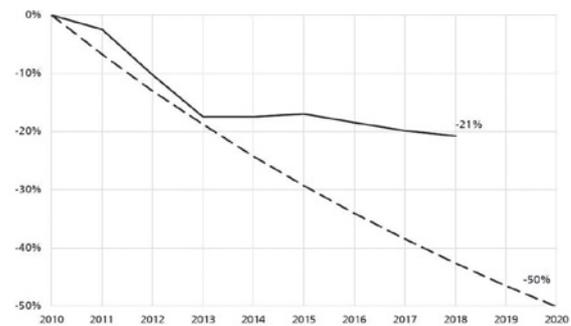


Figure 3. Reduction in the number of road deaths since 2010 (blue line) plotted against the EU target for 2020 (blue dotted line).

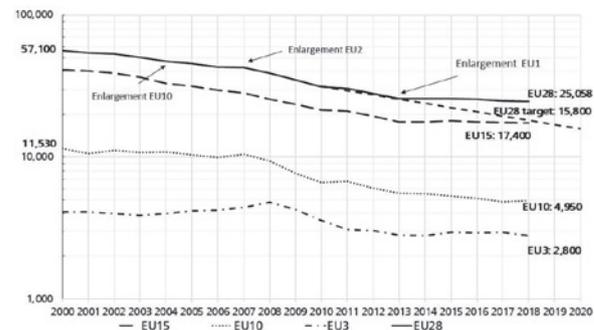


Figure 4. Reduction in road deaths since 2000 in the EU28 (blue line), the EU15 (yellow line), the EU10 (red line) and the EU3 (green line). The logarithmic scale is used to enable the slopes of the various trend lines to be compared.

ber of road deaths by 19% in the same period, the EU10³ by 26% and the EU3⁴ by 22%.

A 55% reduction in the number of road deaths since 2001

Since the first EU target for reducing the number of road deaths was introduced in 2001, two of the three Baltic States achieved the highest reductions. Lithuania reduced the number of road deaths by 76% and Latvia by 73% (Fig. 5). They are followed by Slovenia and Spain with a 67% reduction and Estonia with a 66%. However, the progress has been slow in Romania with a 24% reduction, the Netherlands with 37%, Sweden with 39% and Bulgaria with 40%.

Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom.

³ The EU10 were the group of countries that joined the enlarged EU in 2004: Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia.

⁴ The EU3 includes the latest three countries to join the EU: Romania and Bulgaria in 2007 and Croatia in 2013.

¹ Annual numbers of road deaths in Luxembourg are also small and, therefore, may be subject to large annual fluctuations.

² The EU15 were the first fifteen countries to join the EU: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland,

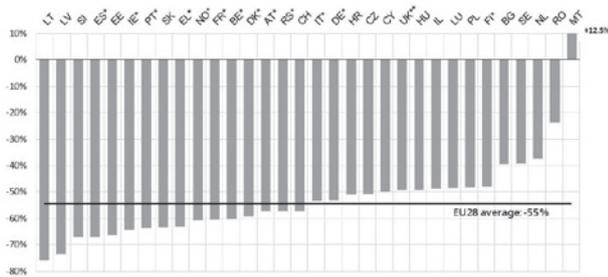


Figure 5. Relative change in road deaths between 2001 and 2018. *National provisional estimates used for 2018. **UK data for 2018 are the provisional total for Great Britain for the year ending June 2018 combined with the total for Northern Ireland for the calendar year 2018.

Norway and Switzerland are the safest countries for road users

In the EU28 the overall level of road mortality was 49 deaths per million inhabitants in 2018, compared with 63 per million in 2010 (Fig. 6). The mortality in the PIN countries still differs by a factor of three between the groups of countries with the highest and the lowest risk.

For the second year in a row, Norway is the leader among PIN countries with 20 road deaths per million inhabitants, followed by Switzerland and the UK with less than 27.5 per million inhabitants in 2018. These countries, together with Sweden, are also among the leaders in terms of road risk (Fig. 7). In Ireland, Denmark, Israel and Sweden, mortality is between 30 and 32 per million. The highest road mortality is in Romania and Bulgaria with 96 and 87 road deaths per million inhabitants respectively.

Road deaths per vehicle-distance travelled

Figure 7 shows the road risk measured in deaths per billion vehicle-km travelled for the 22 countries where up-to-date data are available. This indicator complements the well-established indicator of road mortality (Fig. 6).

Measured in this way, Norway, Switzerland, Sweden, Great Britain, Ireland and Denmark have the lowest risk among the countries collecting up-to-date data (Fig. 7). Road risk in Poland, Croatia and Latvia is almost four times higher than in the countries at the top of the ranking.

Differences between the relative positions of countries in Figure 6 and Figure 7 can arise from differences in aspects such as the levels of motorcycling, cycling or walking, the traffic volume, the proportions of traffic on motorways or rural roads and different methods for estimating the distance travelled.

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

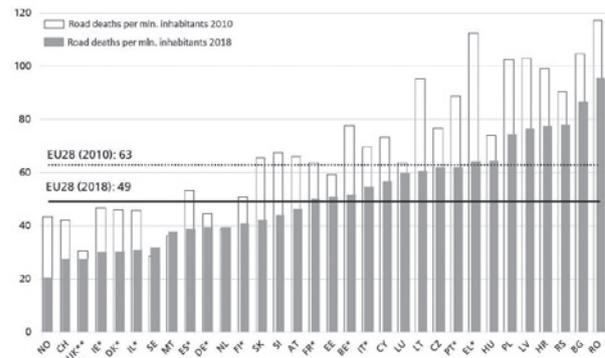


Figure 6. Mortality (road deaths per million inhabitants) in 2018 (with mortality in 2010 for comparison). *National provisional estimates used for 2018. **UK data for 2018 are the provisional total for Great Britain for the year ending June 2018 combined with the total for Northern Ireland for the calendar year 2018.

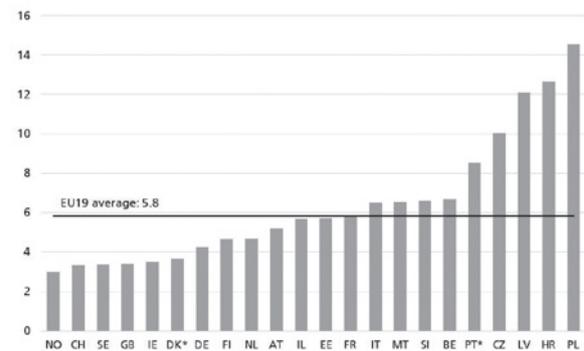


Figure 7. Road deaths per billion vehicle-km. Average for the latest three years for which both the road deaths and the estimated data on distance travelled are available. 2015-2017 AT, BE, CZ, DE, FR, IE, IT, LV, NL, IL, 2016-2017 MT, 2014-2016 FI, SI, NO, 2013-2015 PL. *Provisional figures for road deaths in 2018. Data for GB is used instead of the UK as since 2014 data on distance travelled in Northern Ireland are not available.

portion of travel that takes place in urban areas, when compared to the other countries.

Conclusions

There has been progress in reducing the number of road deaths in the EU, but it was not enough to meet the 2020 target. Since 2010, EU countries achieved an overall reduction in road deaths of 20.7%. This reduction was not achieved and the target is now effectively out of reach. The EU would need to reduce the number of road deaths by 20.6% in 2019 and 2020 to reach the target - a highly unlikely possibility.

Strong political will and urgent measures are needed in all EU Member States to narrow the gap between the de-

sired and the actual EU progress. Below a number of road safety policy recommendations are delivered to the EU and national decision makers on the measures that can accelerate the progress in the short and long term.

Recommendations to Member States

- Seek to accelerate the progress by all available means, including applying proven traffic law enforcement strategies according to the EC Recommendation on Enforcement (European Commission, 2004).
- Adopt and implement the Safe System approach to road safety by addressing all elements of the road transport system in an integrated way and adopting shared overall responsibility and accountability between system designers and road users (OECD-ITF, 2016).
- Provide sufficient government funds to allow the target-oriented setting of measures and set up financing and incentive models for the regional and local level.
- Prepare post-2020 Road Safety Plans, including national targets for reducing serious injuries based on the MAIS3+ standard alongside the reduction of road deaths and quantitative sub-targets based on performance indicators.
- Use the evidence gathered to devise and update relevant policies. Make the choice of measures based on sound evaluation studies and - where applicable - cost effectiveness considerations, including serious injuries in the impact assessment of counter measures.
- Conduct a thorough qualitative assessment of current road safety strategies to evaluate the levels of implementation and effectiveness of the foreseen road safety measures in reaching road safety targets.

Recommendations to the European Commission

Deliver on the commitments stated in the 5th EU Strategic Action Plan (European Commission, 2019):

- Finalise and start collecting with Member States a list of key performance indicators to monitor progress.
- Work with Member States to enable the necessary conditions for the functioning of over-ridable Intelligent Speed Assistance, including regarding the availability of speed limits in a digital format.
- Consider the feasibility and acceptability of non-over-ridable Intelligent Speed Assistance in the future.
- Adopt a long-term operational plan for 2030, including investments in measures, a timetable and structure for delivering the two targets already endorsed (ETSC, 2018).

- Set the strategy within the context of changing mobility patterns including new trends such as automation, increased walking and cycling due to promotion of active travel and an ageing population.
- Support Member States in implementing the revised Road Infrastructure Safety Management Directive (European Parliament & European Council, 2008).
- Deliver on the estimated number of deaths and serious injuries prevented by adopting strong and timely secondary regulation implementing the General Safety Regulation.

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References

- Directive (EU) 2015/413 of the European Parliament and of the Council of 11 March 2015 facilitating cross-border exchange of information on road-safety-related traffic offences, 2015.
- Directive 2006/126/EC of the European Parliament and of the Council of 20 December 2006 on driving licenses, 2006.
- European Commission. Communication from the European Commission to the European Parliament, the Council, the European Economic and Social Committee, the Committee of the Regions *On the road to automated mobility: an EU strategy for mobility of the future*, 2018.
- European Commission. EU Road Safety Policy Framework 2021-2030 - Next Steps towards "Vision Zero", 2019.
- European Commission. *Europe on the Move, Sustainable Mobility for Europe: safe, connected, clean*. Annex 1 Strategic Action Plan on Road Safety, 2018.
- European Commission. Recommendation on Enforcement in the Field of Road Safety 2004/345, 2004 European Parliament, the

Council, the European Economic and Social Committee, the Committee of the Regions *On the road to automated mobility: an EU strategy for mobility of the future*, 2018.

Organisation for Economic Co-operation and Development (OECD), International Transport Forum (ITF). *Zero road death and serious injuries, leading a paradigm shift to a safe system approach*, 2016.

Townsend E. *Briefing: 5th EU Road Safety Action Programme 2020-2030*. ETSC, 2018.

Townsend E. *Prioritising the safety potential of automated driving in Europe*. ETSC, 2016 Proposal for a Directive of the European Parliament and of the Council amending Directive 2008/96/EC on road infrastructure safety management, 2019.

TRL Ltd, Seidl M, Khatri R, et al. *Cost-effectiveness analysis of policy options for the mandatory implementation of different sets of vehicle safety measures. – Review of the General Safety and Pedestrian Safety Regulations*, 2018.

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