International Transport Forum

ROAD SAFETY ANNUAL REPORT 2018

OECD

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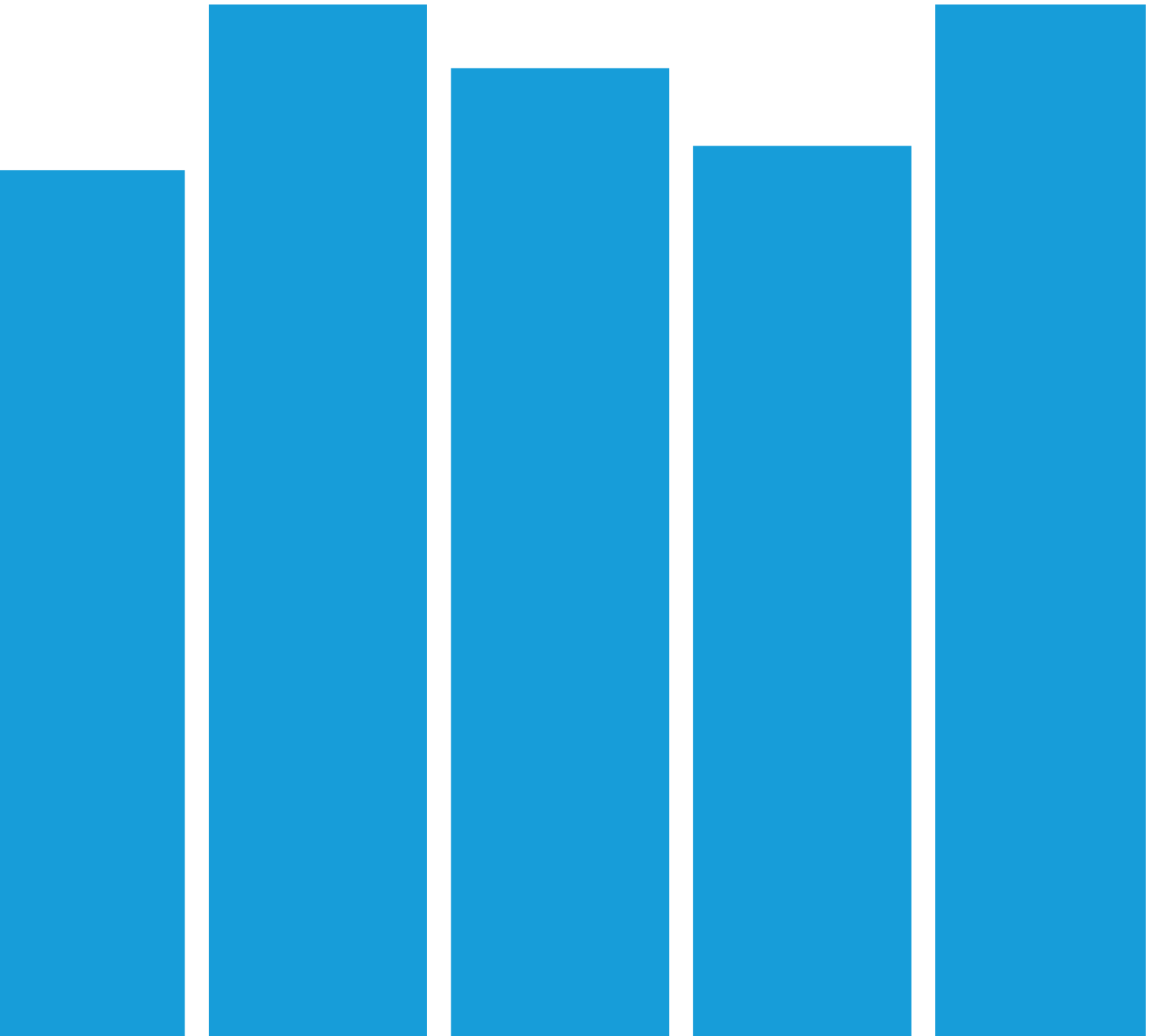
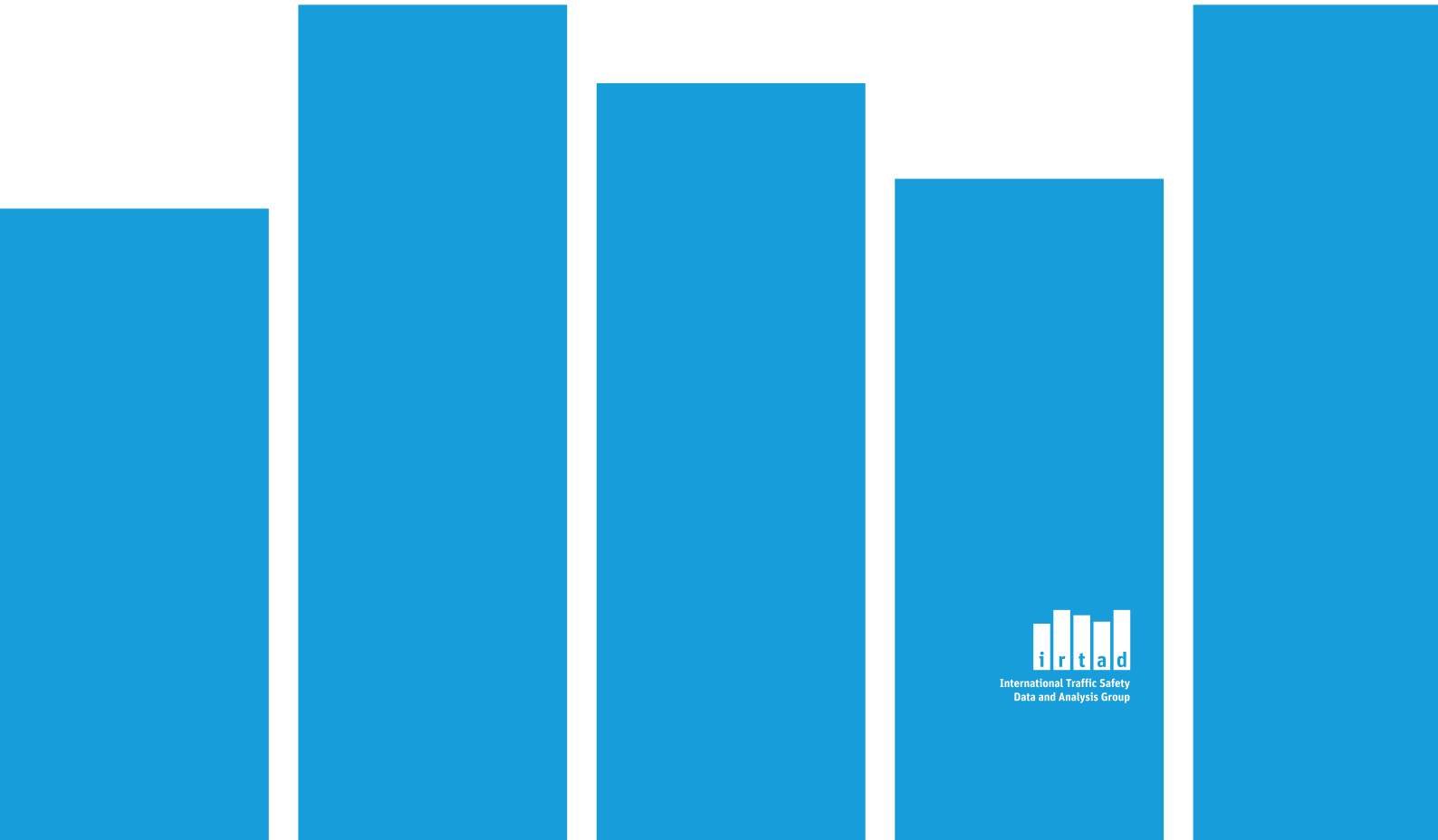
International Traffic Safety Data and Analysis Group

International Transport Forum



ROAD SAFETY ANNUAL REPORT 2018



irtad
International Traffic Safety Data and Analysis Group

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ABOUT THE INTERNATIONAL TRANSPORT FORUM

The International Transport Forum is an intergovernmental organisation with 59 member countries that organises global dialogue for better transport. It acts as a think tank for transport policy and hosts the Annual Summit of transport ministers. The ITF is the only global body that covers all transport modes. The ITF is administratively integrated with the OECD, yet politically autonomous.

ABOUT IRTAD

The International Traffic Safety Data and Analysis Group (IRTAD) is the permanent working group for road safety of the International Transport Forum. The IRTAD database collects and aggregates international data on road crashes; currently its database contains validated road safety data for 32 countries. It thereby provides an empirical basis for international comparisons and more effective road safety policies. The IRTAD Group brings together road safety experts from national road administrations, road safety research institutes, International Organisations, automobile associations, insurance companies, car manufacturers and others. Currently, the IRTAD Group has 80 members and observers from more than 40 countries.

Content

Dear Reader,

The Road Safety Annual Report has been the experts' go-to source for quality data related to traffic crashes for a decade now. Collected and reviewed by the International Transport Forum's permanent working group on road safety, the International Traffic Safety Data and Analysis Group (IRTAD), our data has been hailed as "simply the best in the world" by road safety professionals. Of this we are immensely proud.

Good data is fundamental for good policies. Without a solid evidence base, decision makers drive in the dark. We owe it to humanity to choose the most effective policies and measures to reduce the number of road deaths, and we owe it to tax payers to spend funds wisely, to maximum effect. The 1.3 million deaths from road crashes every year are 1.3. million too many, and we are all called upon to end this tragedy.

The information in the following pages can be a starting point. I invite readers to make active use of it and help to make road traffic less deadly. The 2018 Road Safety Annual Report comes in a new, slimmer and more accessible format. It puts the focus on the international dimension of road safety, with comparative data for 41 countries. Detailed country sections are available online, enabling us to provide more up-to-date information than in an annual print edition.

You will find them at www.itf-oecd.org/road-safety-annual-report-2018

Young Tae Kim
Secretary-General
International Transport Forum

Foreword

It is with great pleasure that I present the most recent and up-to-date road safety data for 41 countries in this 2018 edition of the Road Safety Annual Report, prepared by the International Traffic Safety Data and Analysis Group (IRTAD), the permanent working group on road safety of the International Transport Forum (ITF) at the OECD.

This year's edition is special. It is released on the occasion of the ITF's Annual Summit on "Transport Safety and Security". For the first time, road safety is a main focus of the world's leading transport policy event, providing an opportunity to present to transport policy makers the status of road safety today.

Most member countries of IRTAD have experienced a downward trend in the number of road deaths since the beginning of the decade. This is good news. However, much of that progress has happened at the beginning of the decade. In 2015 and 2016 the number of road deaths plateaued or even increased in several countries. Provisional data for 2017 shows encouraging signs again, but based on data from the last three years it is uncertain whether the overall downward trend will continue.

Reducing the number of road casualties requires continuous action based on the analysis of good quality road safety data. In a number of countries, the easy-to-implement measures are now in place. To further reduce the number of road deaths and serious injuries, more data must be put to use: for instance on the circumstances of crashes, on the mechanisms leading to crashes and determining their severity as well as on the road users involved. Data is also needed for proactive risk assessments of the road network. Setting realistic but ambitious targets is important - not only for reduction of road deaths and serious injuries, but for a whole set of safety performance indicators which form the basis of effective road safety policy.

Putting data to work for better road safety policies is at the heart of the IRTAD Group's work. We are striving to improve knowledge about road safety and offer countries a unique forum to exchange on methodologies to collect and analyse road safety data. This report is the fruit of a rich collaborative effort of all IRTAD members throughout the past year. The IRTAD Group now counts 80 members and observers representing 41 countries. I would like to thank each of them for their engagement and contributions.

In the past year, the IRTAD Group has published three important reports that deserve your attention. *Speed and Crash Risk* (ITF 2018) analyses the relation between vehicle speeds and crashes. With political debates about speed limits occuring in many countries, this report provides evidence based on case studies from ten countries where higher average speeds are linked to more casualties and vice versa. The second report, *Alcohol-related Road Casualties in Official Crash Statistics* (ITF 2018), reviews the methodology for collecting data on alcohol-related crashes. It highlights that the incidence of drink-driving is underreported in most countries and therefore the importance of drink-driving as a contributing factor for fatal crashes is underrated.

The IRTAD Group also continues to assist low- and middle-income countries with improving their crash data systems and to help them better understand their road safety issues. In co-operation with the Fédération Internationale de l'Automobile (FIA), we completed a two-year project on *Benchmarking Road Safety in Latin America* (ITF 2017). This reviewed the road safety performance of ten Latin American countries, in order to identify strengths and weaknesses as well as areas where lessons from other countries can be usefully applied.

Building on IRTAD's work with Latin America, we initiated a series of workshops to prepare with our partners at FIA and the World Bank the establishment of a Road Safety Observatory in Africa.

Fred Wegman
Chair of the IRTAD Group

Road safety trends

Preliminary figures show fewer road deaths in 2017, but it is uncertain whether the long-term downward trend will continue.

In 2015 and 2016, the trend slowed down and even reversed in some countries. For 2017, a decrease in the number of road deaths was reported by 20 of 29 member countries of the International Road Traffic Data and Analysis Group (IRTAD) for which preliminary fatality data are available. Four saw the number of traffic fatalities remain stable. Only five registered increases of 2% or more in road deaths compared to 2016 (see Table 1).

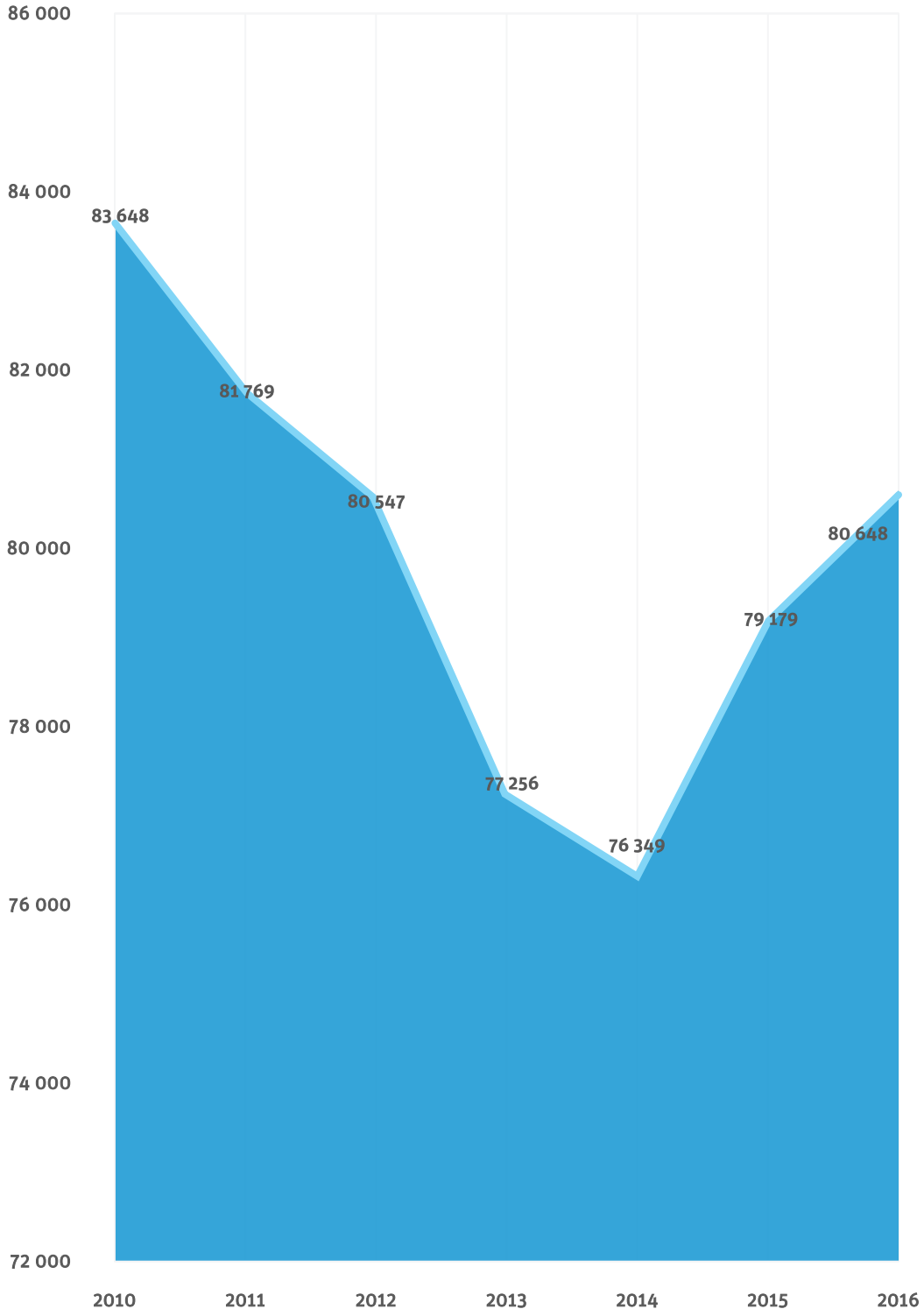
The overall number of road deaths in IRTAD member countries increased in 2016.

A total of 75 098 road deaths were registered in 2016 in the 31 IRTAD member countries for which data are consistently available (2015: 73 879).[1] This represents 1.6% more road fatalities overall. Thirteen countries saw fatalities decline in 2016, while 18 countries recorded increases (see Table 2). The countries that recorded the largest decrease in 2016 were: Lithuania, the Czech Republic and Switzerland. The overall average is significantly influenced by the United States. As the most populous IRTAD member country, the US accounted for nearly half of the absolute number of the group's road deaths in 2016.[2]

1 The IRTAD database includes validated data for 32 countries. Argentina did not publish data for 2015 and is excluded for purposes for comparability. There were 80 648 road deaths in IRTAD countries in 2016 with Argentina included

2 The U.S. registered 37 461 of 80 648 road deaths, including Argentina.

Aggregate evolution in the number of road deaths 2010-2016 (32 Countries)



Data for Argentina in 2016 are an estimate.

Traffic fatalities in 2016 were down 3.6% compared to 2010.

If the United States are excluded, the reduction was nearly 15%. However, most of the improvement was achieved at the beginning of the current decade. Since 2015, progress has slowed down markedly and a number of countries have experienced a reversal. Compared to 2014, the year with the lowest traffic death toll on record for IRTAD countries in the past three decades, the death toll was 5.6% higher in 2016.

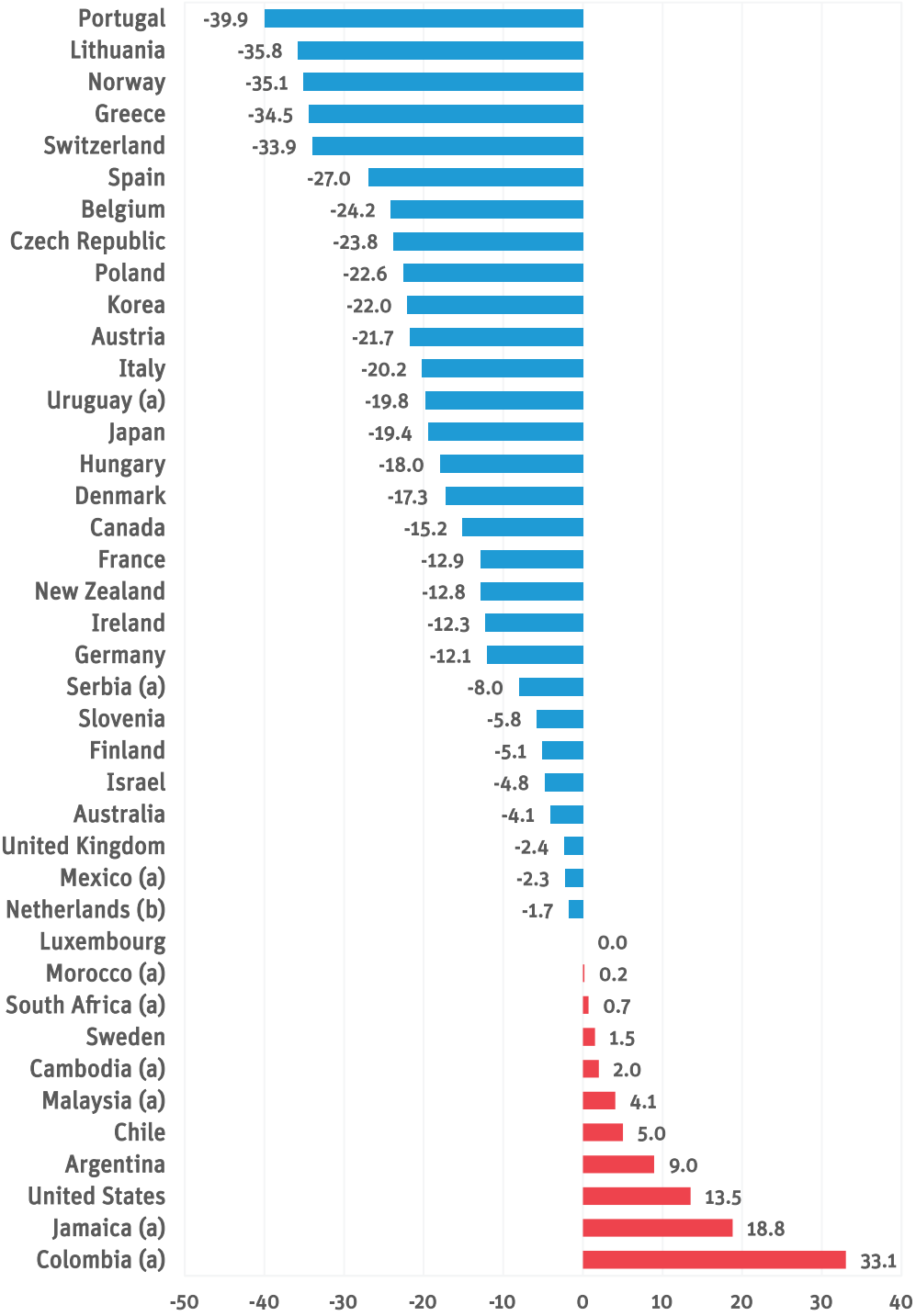
The long-term trend is positive but very far from sufficient to achieve international road safety objectives.

The United Nations Sustainable Development Goals (SDGs) set out a 50% reduction target for road deaths by 2020 compare to 2010. While five IRTAD member countries have made good progress in reducing fatalities by more than one-third since 2010 (which is about the average reduction required to halve fatalities by 2020), the majority of countries are not achieving what is needed. Indicative numbers from low- and middle-income observer countries in IRTAD suggests that in some of those countries the number of road deaths has increased. Generally, the road safety situation in low- and middle-income countries, where 90% of global road deaths occur, is much less understood than in IRTAD member countries and it is likely that road deaths in these regions are underreported, as reflected by the estimations of the WHO global status report.

Large disparities between countries' longer-term road safety performance lie behind the averages.

Benchmarked against 2010 results, the number of traffic deaths has fallen in 26 out of 32 countries in the IRTAD Group in 2016. The strongest reductions were achieved by Portugal (-39.9%), Lithuania (-35.8%) and Norway (-35.1%). The success of Norway is particularly remarkable, as the country's roads were already among the safest in the world. The United States experienced the largest increase (+13.5%) driven by a 14% increase between 2014 and 2016. The four other countries that registered more traffic deaths in 2016 than in 2010 are Argentina (+9.0%), Chile (+5.0%), Sweden (+1.5%) and Iceland (10 more deaths). The number of road deaths remained stable in Luxembourg.

Change in the number of road deaths 2010-2016 in percent



Data from Iceland are not shown because the the observations are too low to have meaningful percentage changes.
(a) Data as provided by the countries and not validated by IRTAD.
(b) Real data (actual numbers instead of reported numbers by the police).

Road safety trends

A number of overarching factors help to explain and put into perspective recent trends in road safety performance, in addition to factors at work at national level.

1 The economic downturn and recovery:

The aftermath of the 2008 financial crisis was associated with a decrease in the number of road deaths. The decline of economic activity may have contributed to about two thirds of the overall reduction in the years 2008 to 2010 (see Why Does Road Safety Improve When Economic Times Are Hard?, ITF 2015). Conversely, the economic recovery from 2013 onwards was accompanied by a significant increase in the number of road deaths as motorised travel picked up again. The number of road deaths since 2010 still decreased overall when adjusted for the impact of the economic downturn, but at a slower pace than the 3.6% average reduction suggests.

2 The increased popularity of cycling:

Countries that collect data on cycling have registered a strong increase in kilometres cycled over the past years. In several cases, this development is associated with significantly higher numbers of fatal cycling crashes. Studies show that the overall public health benefits of more cycling outweigh negative health impacts of increased crash risk (see Cycling, Health and Safety, ITF 2013). Nevertheless, the growing number of cyclists requires new approaches to traffic management and investment into safe cycling infrastructure to improve road safety and reduce fatalities and injuries.

3 A slack in enforcement of traffic rules:

Several countries report a lower intensity of enforcement measures. In some cases, this is due to a shift in the police forces' priorities. Less strict enforcement of traffic rules is likely to encourage dangerous driving behaviour, notably speeding and drink-driving, and ultimately leads to more crashes and traffic deaths.

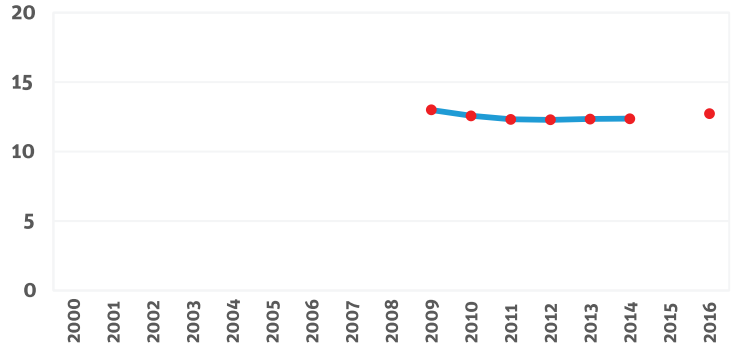
4 The rise of distracted driving:

Several countries mention a marked increase in the number of crashes due to the use of mobile phone or other digital devices while driving. Empirical evidence is patchy in the absence of standardised data to monitor the impact of distraction on driving. The available information supports the view, however, that distracted driving is developing into a major road safety risk that requires a more systematic response.

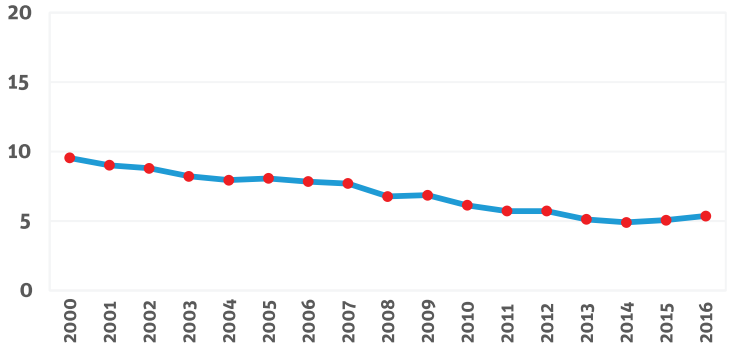
Evolution of road fatalities

2000-2016 per 100 000 inhabitants

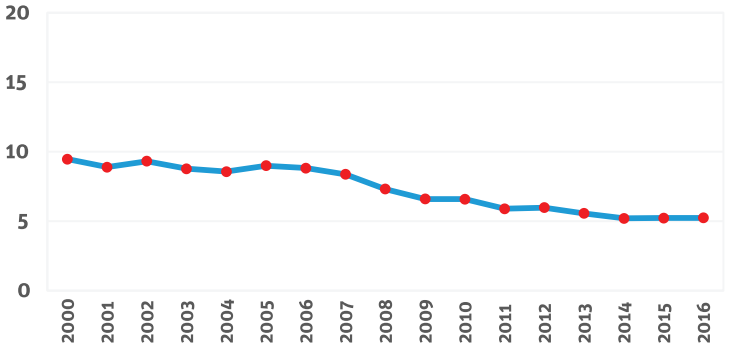
ARGENTINA



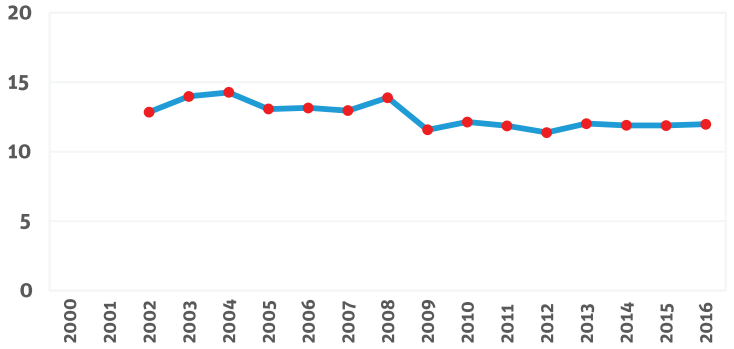
AUSTRALIA



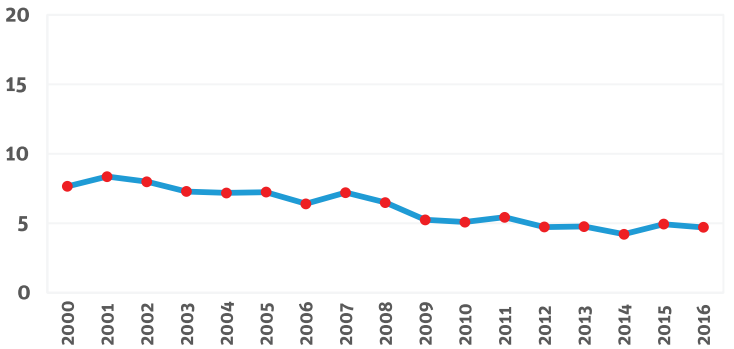
CANADA



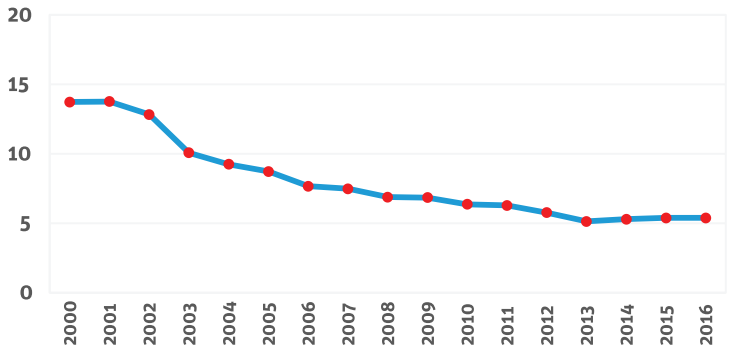
CHILE



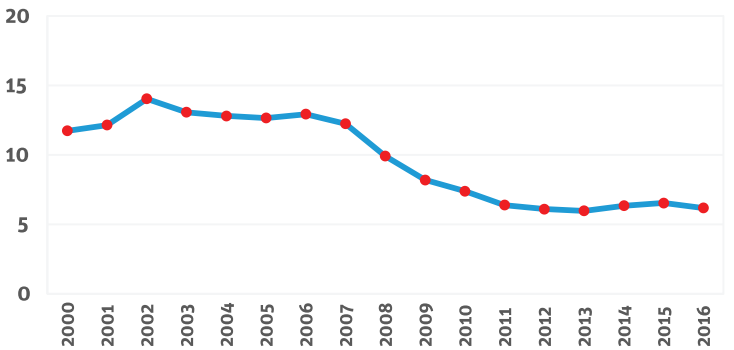
FINLAND



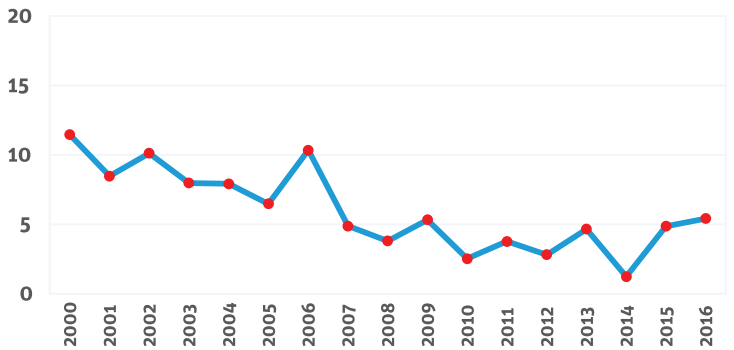
FRANCE



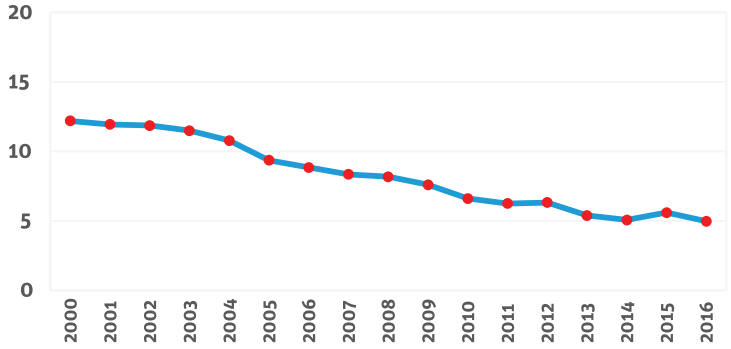
HUNGARY



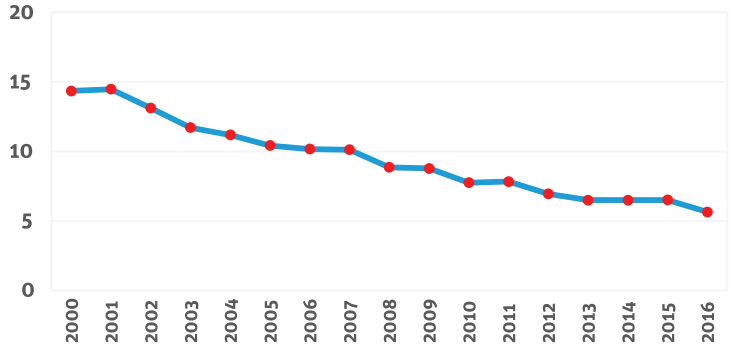
ICELAND



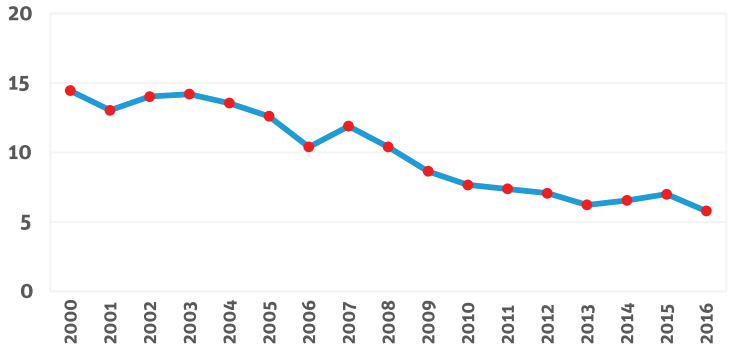
AUSTRIA



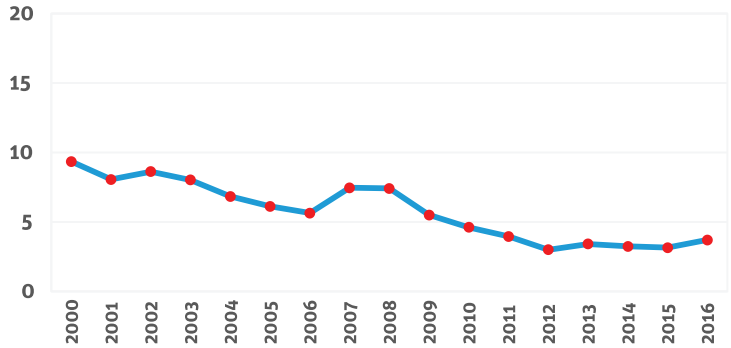
BELGIUM



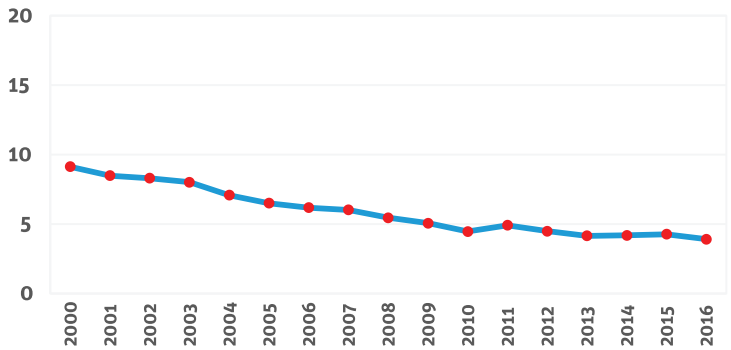
CZECH REPUBLIC



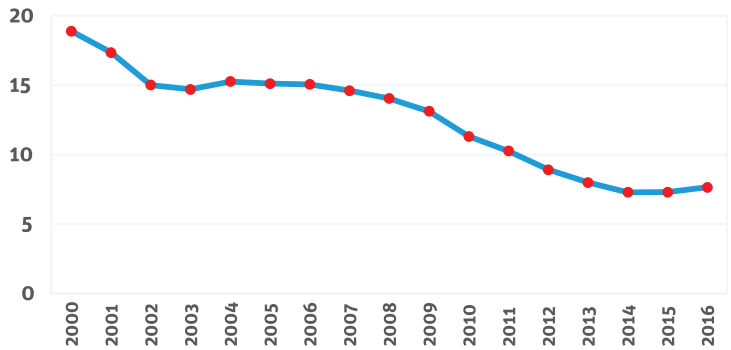
DENMARK



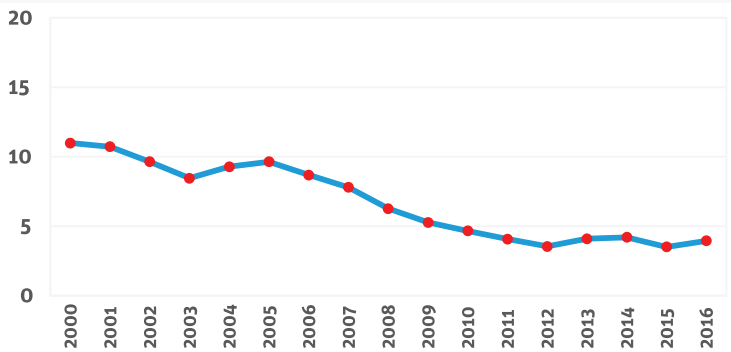
GERMANY



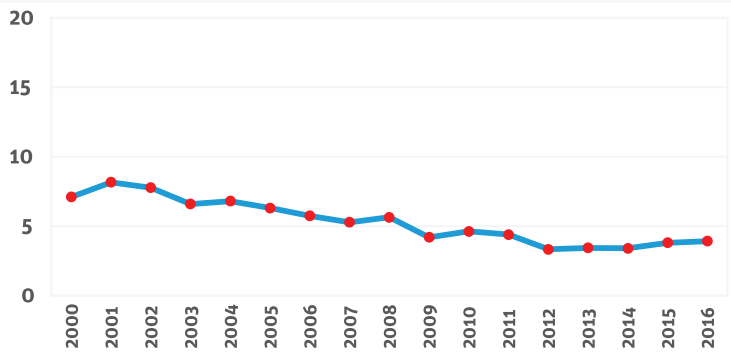
GREECE



IRELAND



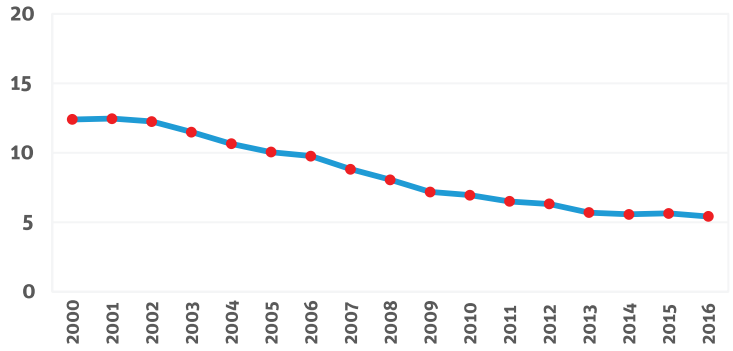
ISRAEL



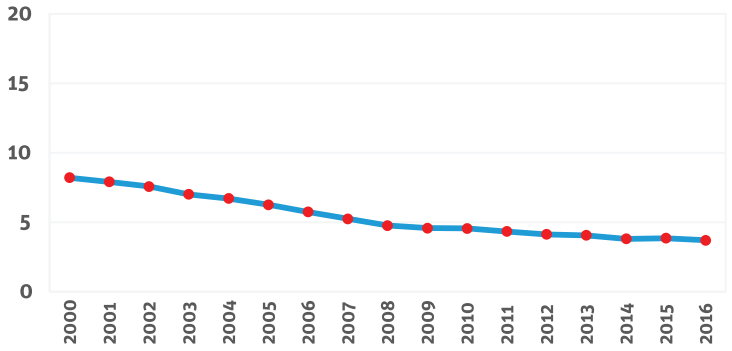
Evolution of road fatalities

2000-2016 per 100 000 inhabitants

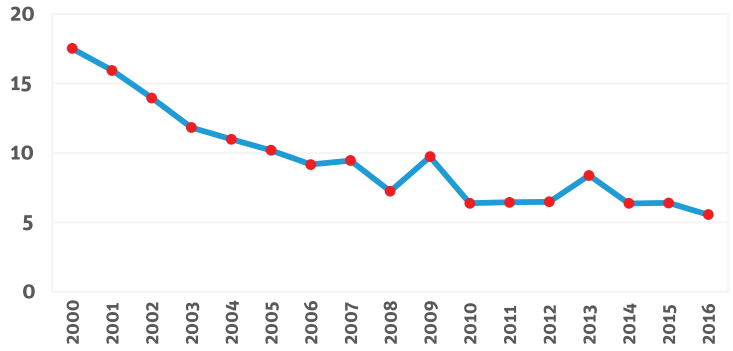
ITALY



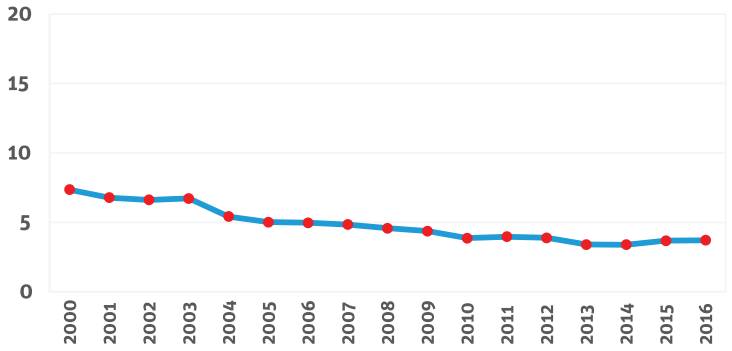
JAPAN



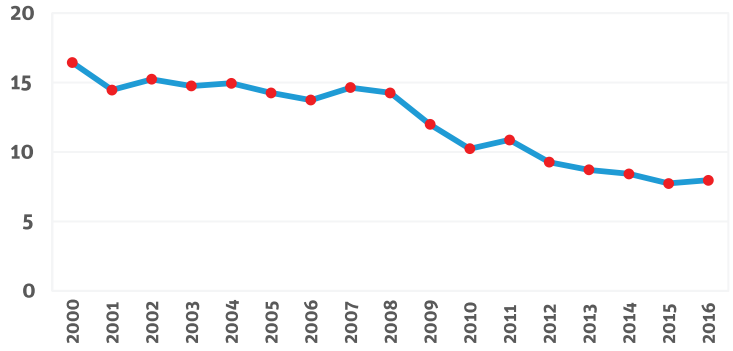
LUXEMBOURG



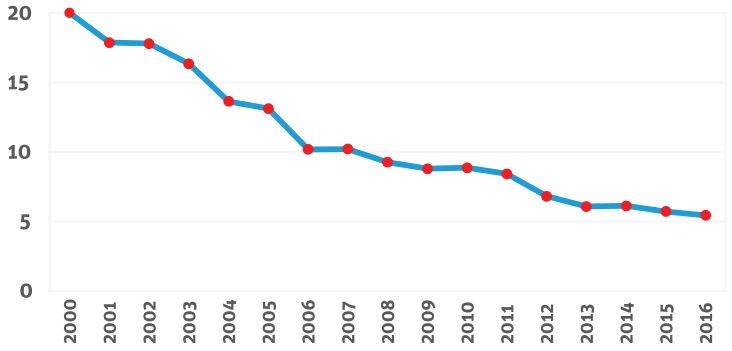
NETHERLANDS [a]



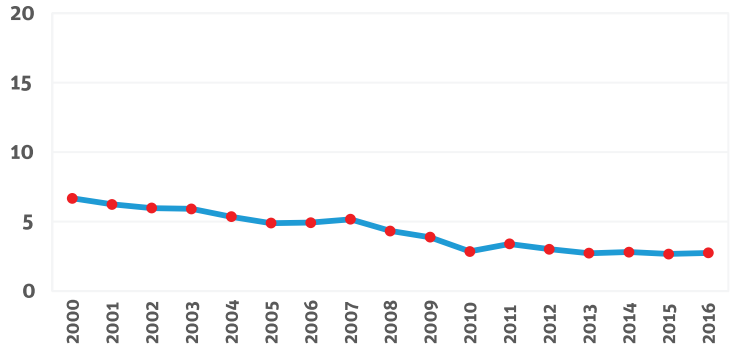
POLAND



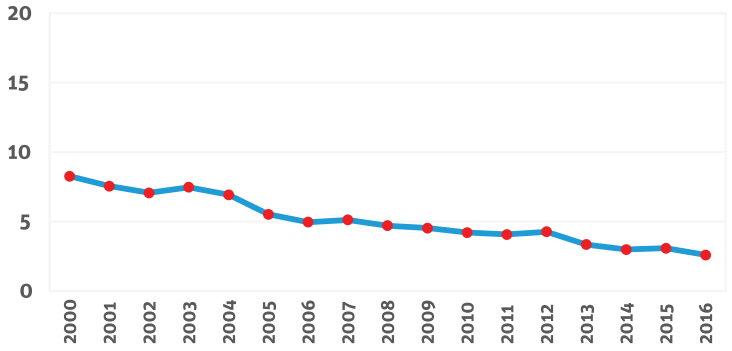
PORTUGAL



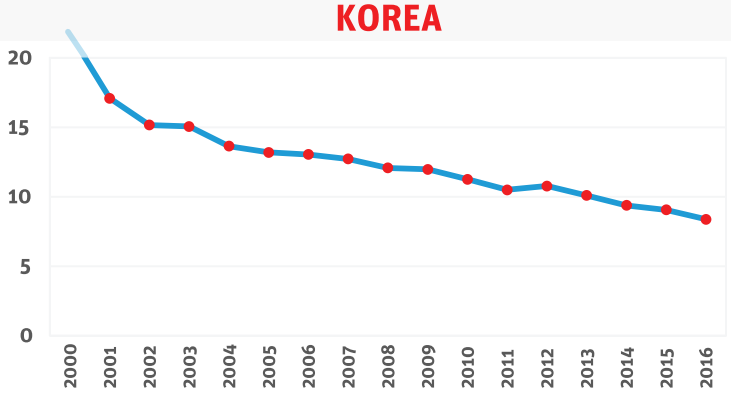
SWEDEN



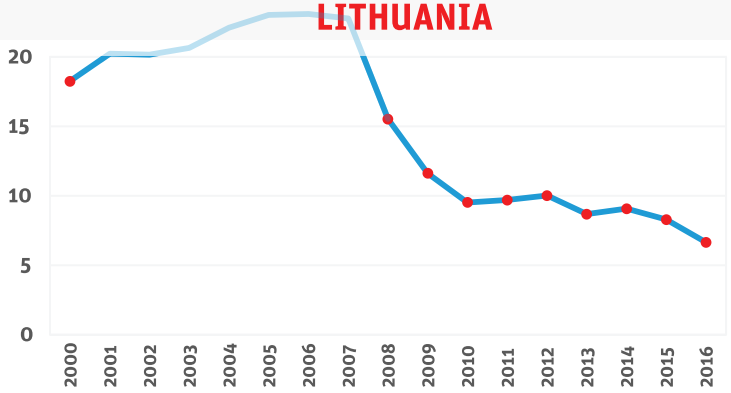
SWITZERLAND



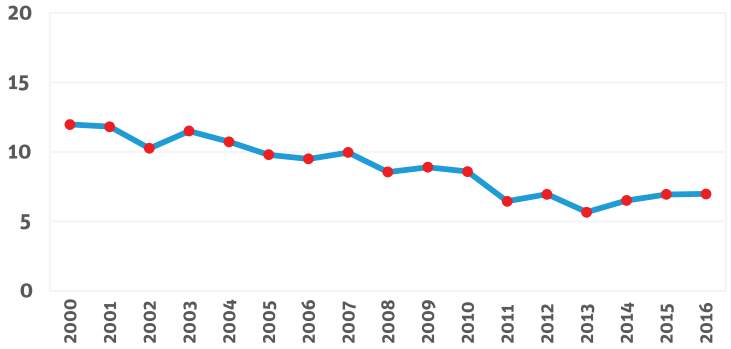
KOREA



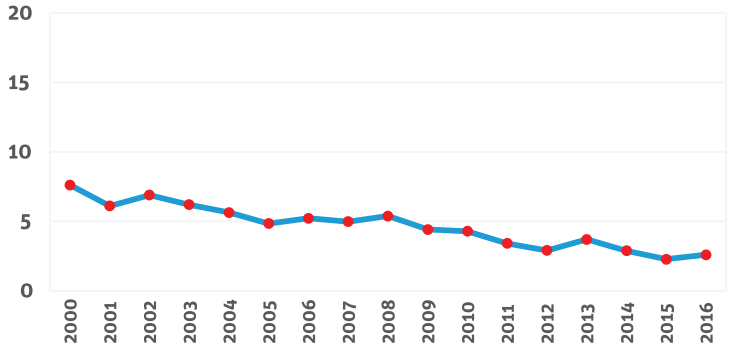
LITHUANIA



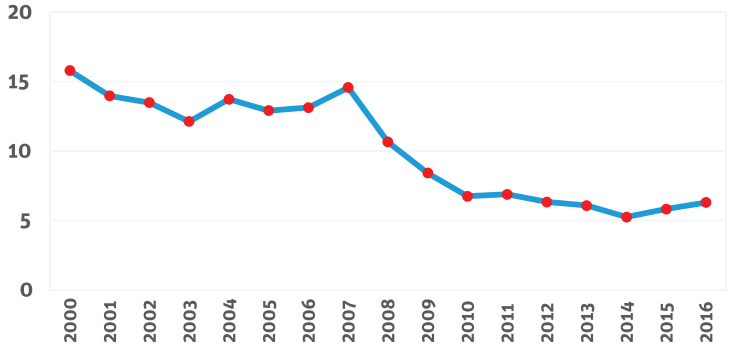
NEW ZEALAND



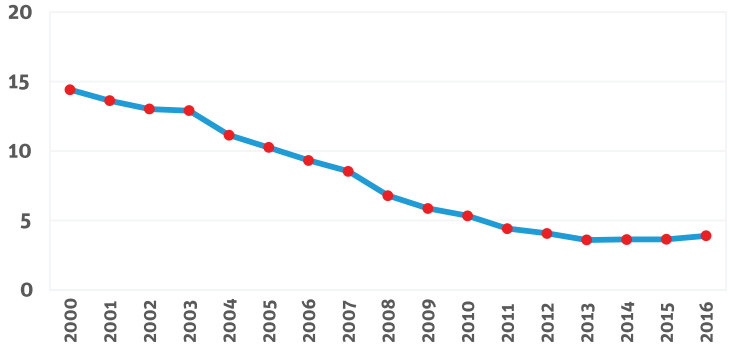
NORWAY



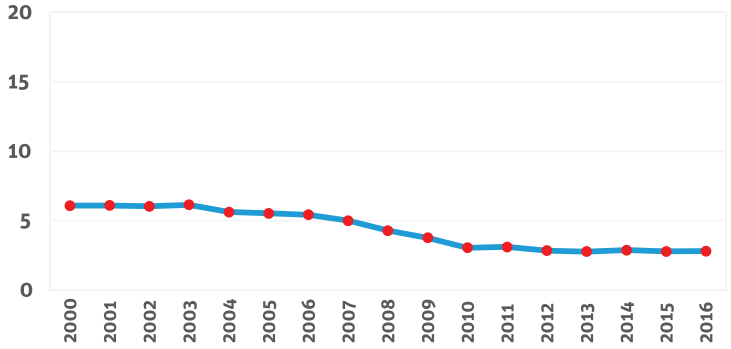
SLOVENIA



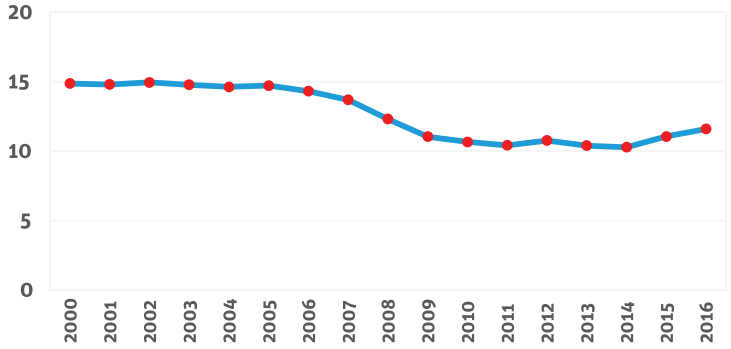
SPAIN



UNITED KINGDOM



UNITED STATES



(a) Real data (Actual numbers instead of reported numbers by the police).

Lead indicators

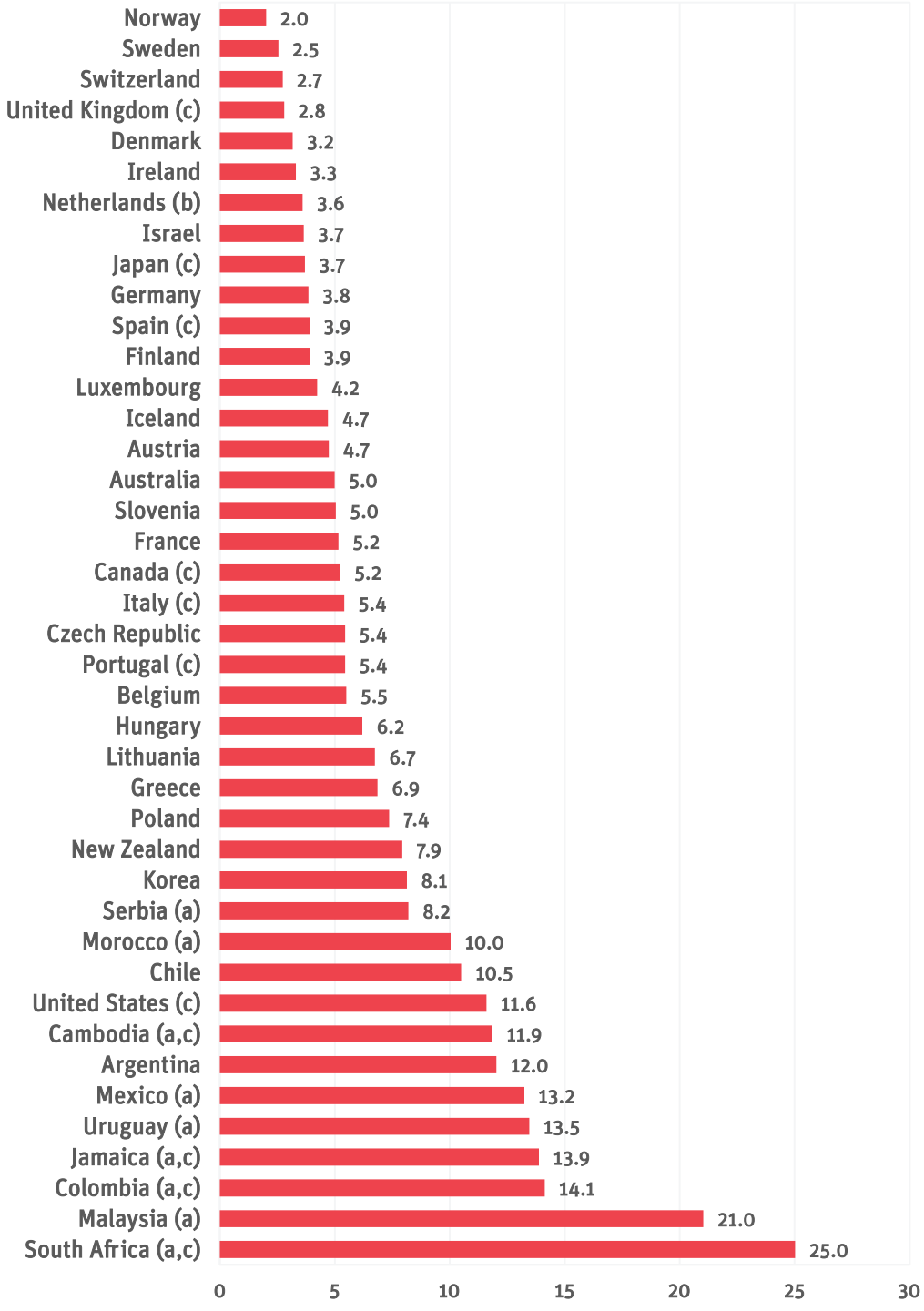
Traffic-related mortality rates differ widely but are narrowing.

Four countries recorded fewer than three fatalities per 100 000 inhabitants in 2016: Norway, Switzerland, Sweden and the United Kingdom. In 2010, only two countries had achieved this level. In 2000, the lowest rate of traffic-related mortality among IRTAD countries had been 6.1 deaths per 100 000 inhabitants in the United Kingdom. Thirteen countries formed a group of relatively well-performing countries with mortality rates of five or less - a rate that not a single country had achieved in 2000. The United States stands out with a relatively high traffic mortality rate of 11.6 in 2016, together with the Latin American IRTAD countries, all of which registered more than 12 road deaths per 100 000 inhabitants.

With 2.6 fatalities per 100 000 inhabitants, Norway achieved one-fifth of Argentina's traffic mortality rate of 12.7. Despite these significant disparities, traffic-related mortality rates in all IRTAD member countries are far below the high rates in many low- and middle-income countries. For example, South Africa, an IRTAD observer country, reported more than 25 deaths per 100 000 population for 2016. With a marked reduction in the number of road deaths, Norway achieved a mortality rate of two deaths per 100 000 inhabitants in 2017 and therefore a historic first since the systematic collection of road safety data began.

The mortality rate is useful for comparing the road safety level of countries with similar levels of motorisation and traffic. Comparing the number of road fatalities in relation to the total distance travelled provides an indicator for assessing the risk of travelling on a given road network. The number of traffic deaths in relation to the number of vehicles on the road serves as an approximation of crash risk exposure in the absence of data on distance travelled.

Road fatalities per 100 000 inhabitants 2017 or latest available



Data for 2017 is provisional.

(a) Data as provided by the countries and not validated by IRTAD.

(b) Real data (actual numbers instead of reported numbers by the police).

(c) 2016 data.

Lead indicators

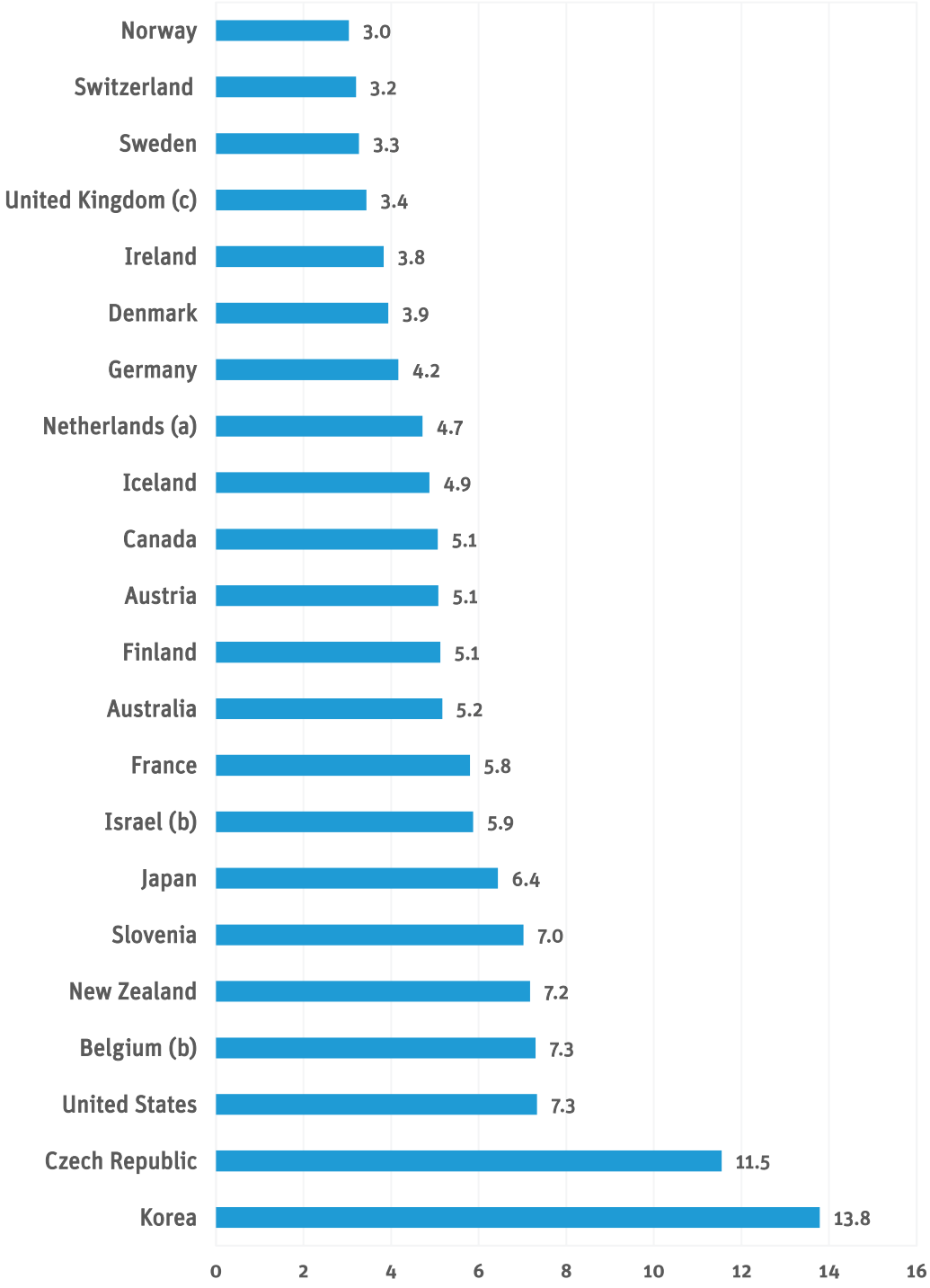
Travel risk measured by distance travelled has decreased since 2010.

The one exception are the United States (see Table 3). Iceland also shows an increase, but the very low number of road deaths there, typically between 4 and 12 per year, means very small changes in the number of absolute road deaths cause large statistical fluctuations. Six countries recorded fewer than four deaths per billion vehicle-kilometres travelled in 2016: Norway, Switzerland, Sweden, the United Kingdom (without Northern Ireland), Ireland and Denmark. These are three more than in 2010. Data on vehicle-kilometres travelled is regularly collected in 22 of the 32 IRTAD countries; it is usually not available for the less-developed countries.

The same countries are among the best performers when considering the fatality rate per 10 000 registered motor vehicles. In 2016, Norway, Switzerland, Sweden and the United Kingdom registered fatality rates below 0.5 deaths per 10 000 registered motor vehicles. In 2000, the four best-performing countries had fatality rates of 1.2. Thus, the fatality risk in these countries has more than halved in the past 16 years. Among countries for which validated data exists, the fatality risk was highest in Chile, which had 4.5 road deaths per 10 000 motorised vehicles or 15 times the rate of top-performing Norway. Importantly, other countries exceed the risk level of Chile, but not based on validated data.

Road deaths per distance travelled 2016

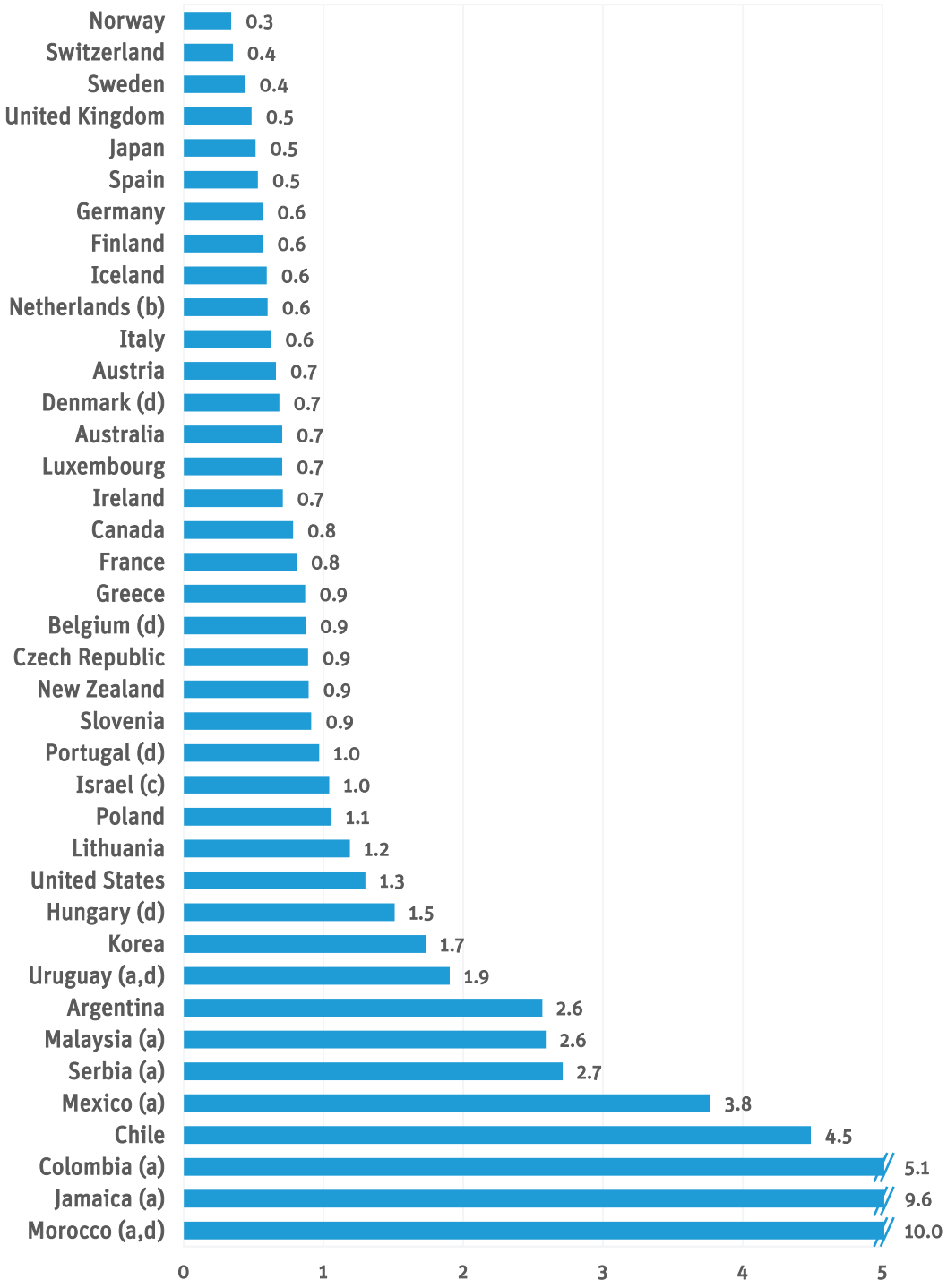
billion vehicle-kilometres



Data from Argentina, Cambodia, Chile, Greece, Hungary, Italy, Jamaica, Lithuania, Luxembourg, Malaysia, Morocco, Poland, Portugal, Serbia, Spain and Uruguay are not available.
Data from Colombia and Mexico are not shown.
(a) Real data (actual numbers instead of reported numbers by the police).
(b) 2015 data.
(c) Data for Great Britain only.

Road deaths per 10 000 vehicles 2016

registered vehicles



Data from Cambodia are not available.

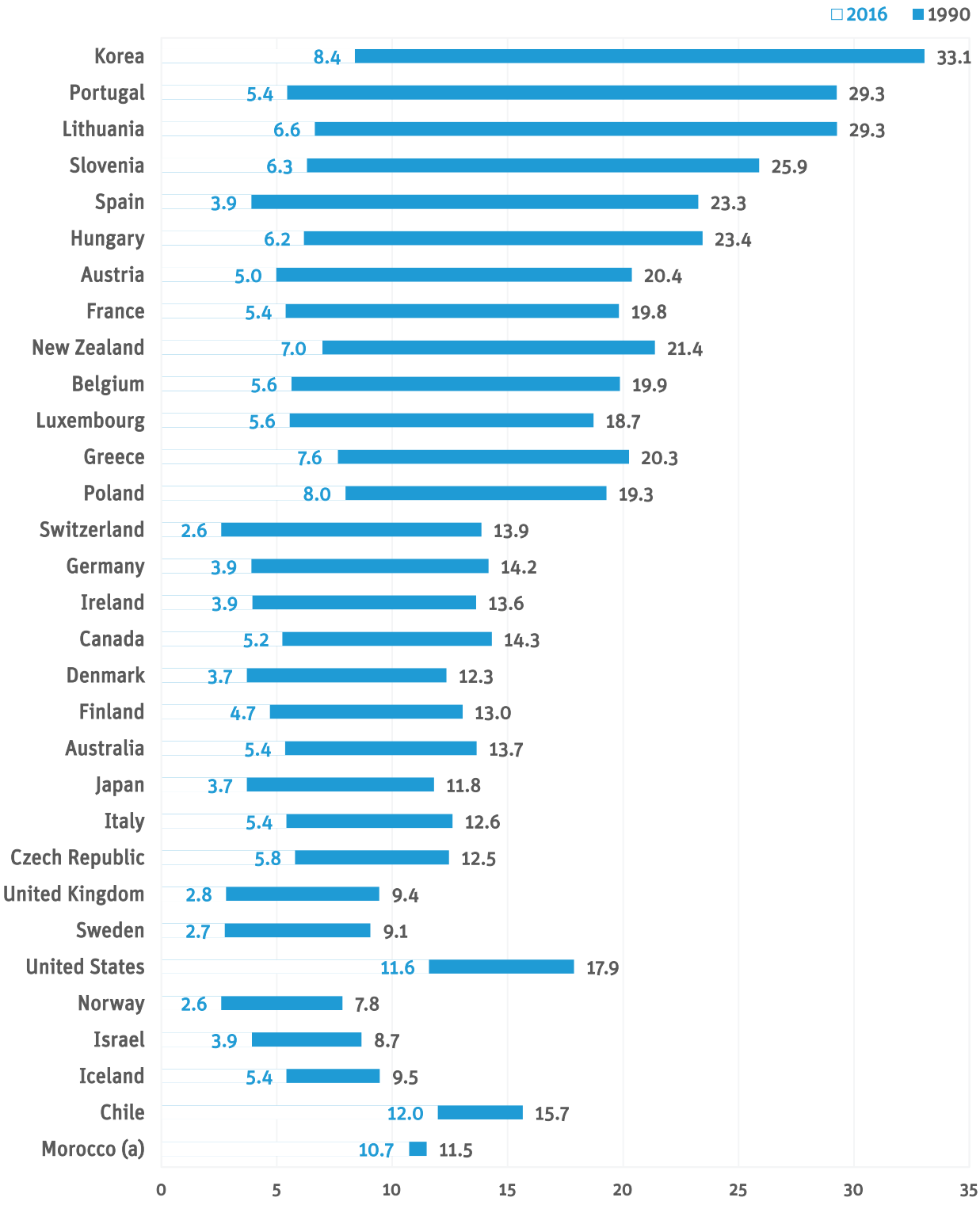
(a) Data as provided by the countries and not validated by IRTAD.

(b) Real data (actual numbers instead of reported numbers by the police).

(c) 2015 data.

(d) Mopeds are not included in the registered vehicles.

Progress in reducing mortality rates 1990, 2016 per 100 000 inhabitants



Data from Argentina, Cambodia, Colombia, Jamaica, Malaysia, Mexico, Netherlands, Serbia and Uruguay are missing.
(a) Data as provided by countries and not validated by IRTAD.

Road user groups

Car occupants continue to benefit most from road safety improvements.

In 2016, car passengers represented 40% of all road deaths; in 2000, their share had been nearly 50%. Since 2010, the number of car occupants killed in crashes has decreased in all countries except Chile (+25%) and the United States (+7%). The addition of safer vehicles to the fleets, equipped with technologies that prevent crashes (such as Electronic Stability Control) or mitigate their consequences (e.g. airbags) contribute to this improvement.

The number of vulnerable road users killed in traffic increased in many countries.

In 2016, pedestrians, cyclists and riders of powered two-wheelers represented more than half of the total number of road deaths. The respective share of all traffic fatalities rose from 15% in 2000 to 18% in 2016 for motorcyclists, from 22% to 24% for pedestrians, and from 6% to 8% for cyclists. In 8 out of the 30 countries for which data are available and validated, more pedestrians died in crashes in 2016 than in 2010. For cyclists, this was the case in 12 countries, and in 11 countries for motorcyclists.

Whether more fatalities among a specific group of road users reflect an increase in risk or is the result of broader factors, (such as more kilometres travelled by that group) is impossible to ascertain without information on the exposure to risk of the different road user categories. Car occupants have benefitted from safer vehicles with better protection. Cycling may have seen more fatalities as a result of increased numbers of cyclists because of the promotion of active transport which is not always accompanied by the development of safe cycling infrastructure.

The relationship between road safety and economic performance

The number of road deaths significantly declined in several countries between 2008 and 2010. The IRTAD report Why Does Road Safety Improve When Economic Times Are Hard? (ITF, 2015) showed that during the period 2008-2010 two thirds of the reduction in road deaths in 14 countries could actually be attributed to the recession. While economic activity is recovering in several countries, a forthcoming update of the 2015 study by Rune Elvik examines whether the deteriorating performance in road safety was related to it.
The main conclusions are:

- Economic recession is associated with a larger reduction of the number of traffic fatalities than would be expected based on long-term trends. In a few countries there is evidence that when economic growth resumes and unemployment falls, the decline in the number of traffic fatalities slows down significantly or even reverses. However, the decline in the number of traffic fatalities that was evident before 2010 has continued after 2010 in most of the countries included in the study.

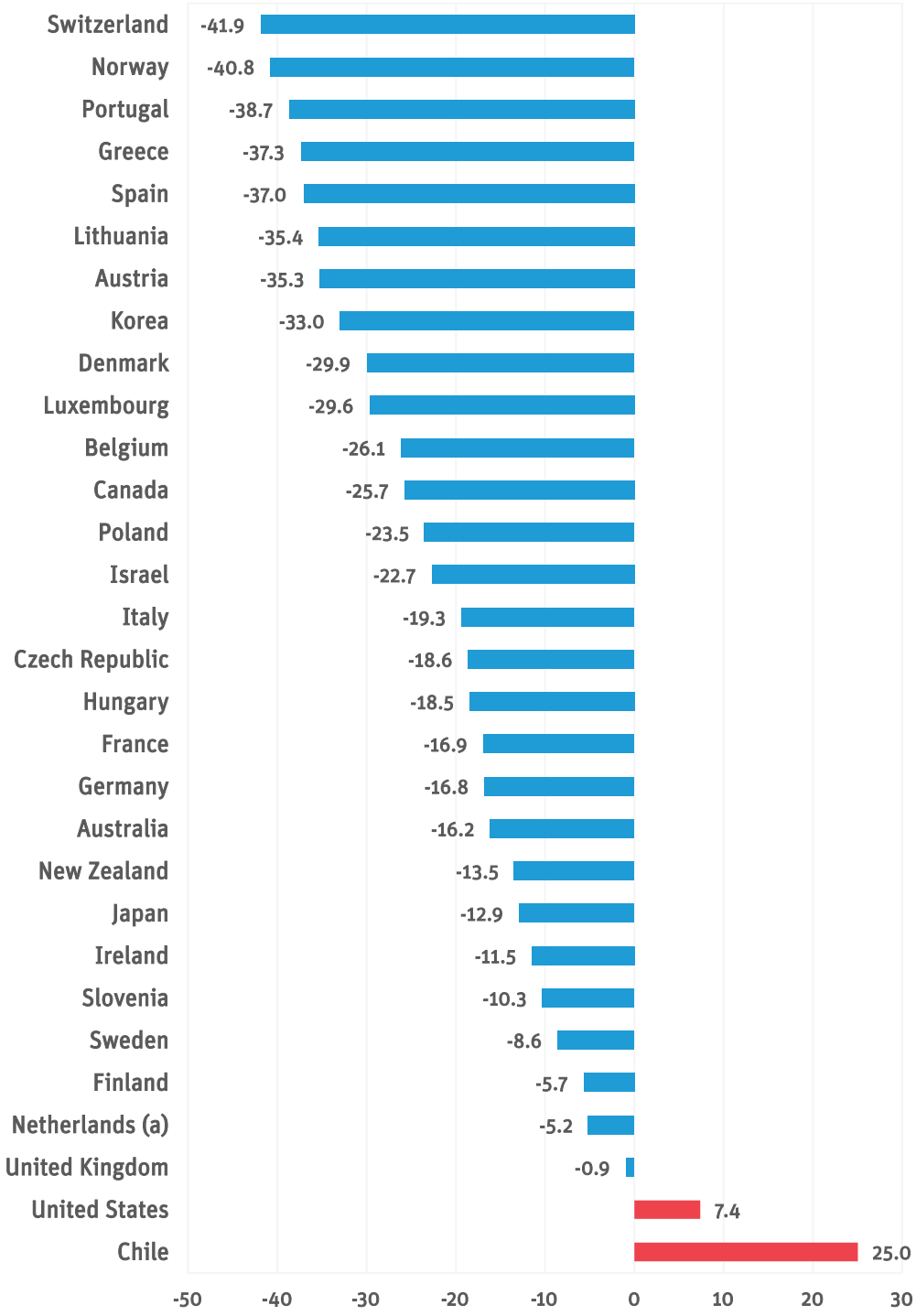
- Considerable differences between countries exist with respect to how sensitive the number of traffic fatalities is to changes in unemployment. In some countries changes in unemployment were associated with large changes in the number of fatalities, for instance in Sweden and in the United States. In other countries, like France and Japan, fluctuations in unemployment hardly affected the long-term declining trend in the number of fatalities.

- Why is the relationship strong in some countries and weak in others? The answer to this question probably lies in two policy areas. On the one hand, if road safety policy is effective, i.e. it succeeds in bringing about a sustained reduction in the number of traffic fatalities year after year, it may be more resilient to the impacts of other factors like unemployment than where road safety policies have been less effective. On the other hand, labour market policies may be more impactful in some countries than in others. An effective labour market policy limits the rise of unemployment and keeps its fluctuations over time within a narrow range – potentially so much so, that unemployment will not have a large influence on the number of traffic fatalities.

Source: Why Does Road Safety Improve When Economic Times Are Hard? (ITF, 2015)

Car occupant deaths 2010-2016

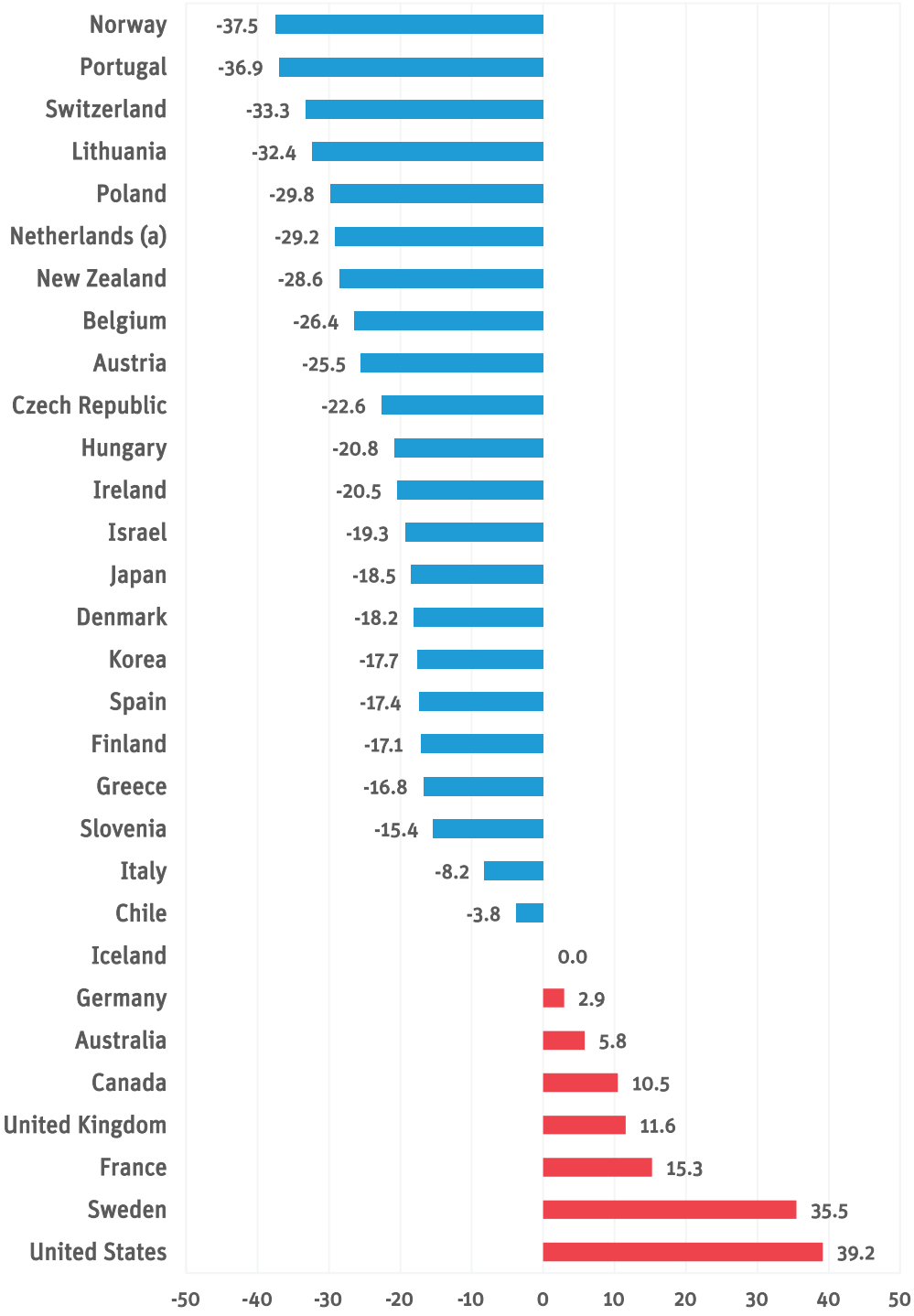
Percentage change



Data from Argentina are not available.
Data from Iceland are not shown since observations are too low to have meaningful percentage changes.
(a) Real data (actual numbers instead of reported numbers by the police).

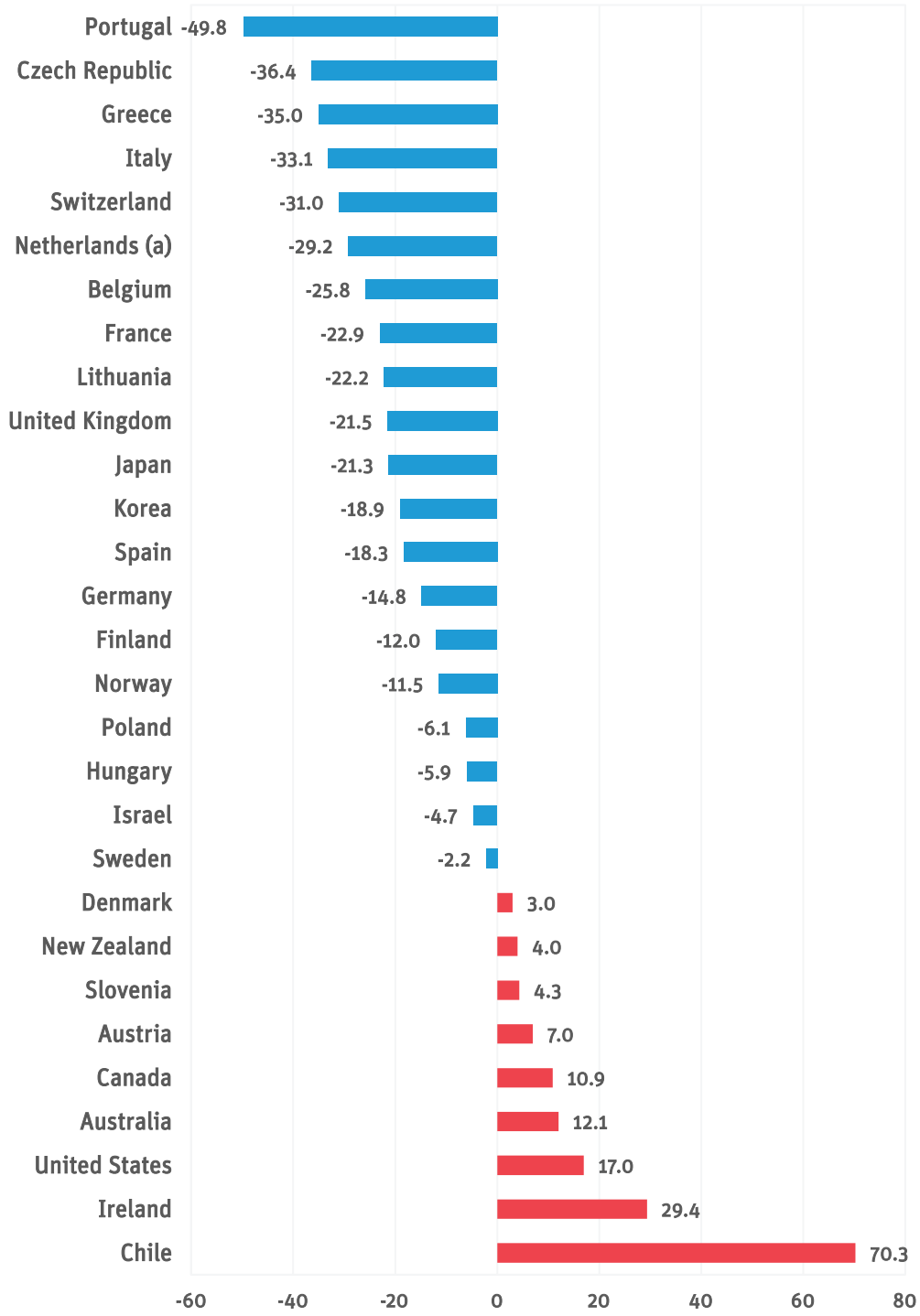
Pedestrian deaths 2010-2016

Percentage change



Data from Argentina are not available.
Data from Luxembourg are not shown since observations are too low to have meaningful percentage changes.
(a) Real data (actual numbers instead of reported numbers by the police).

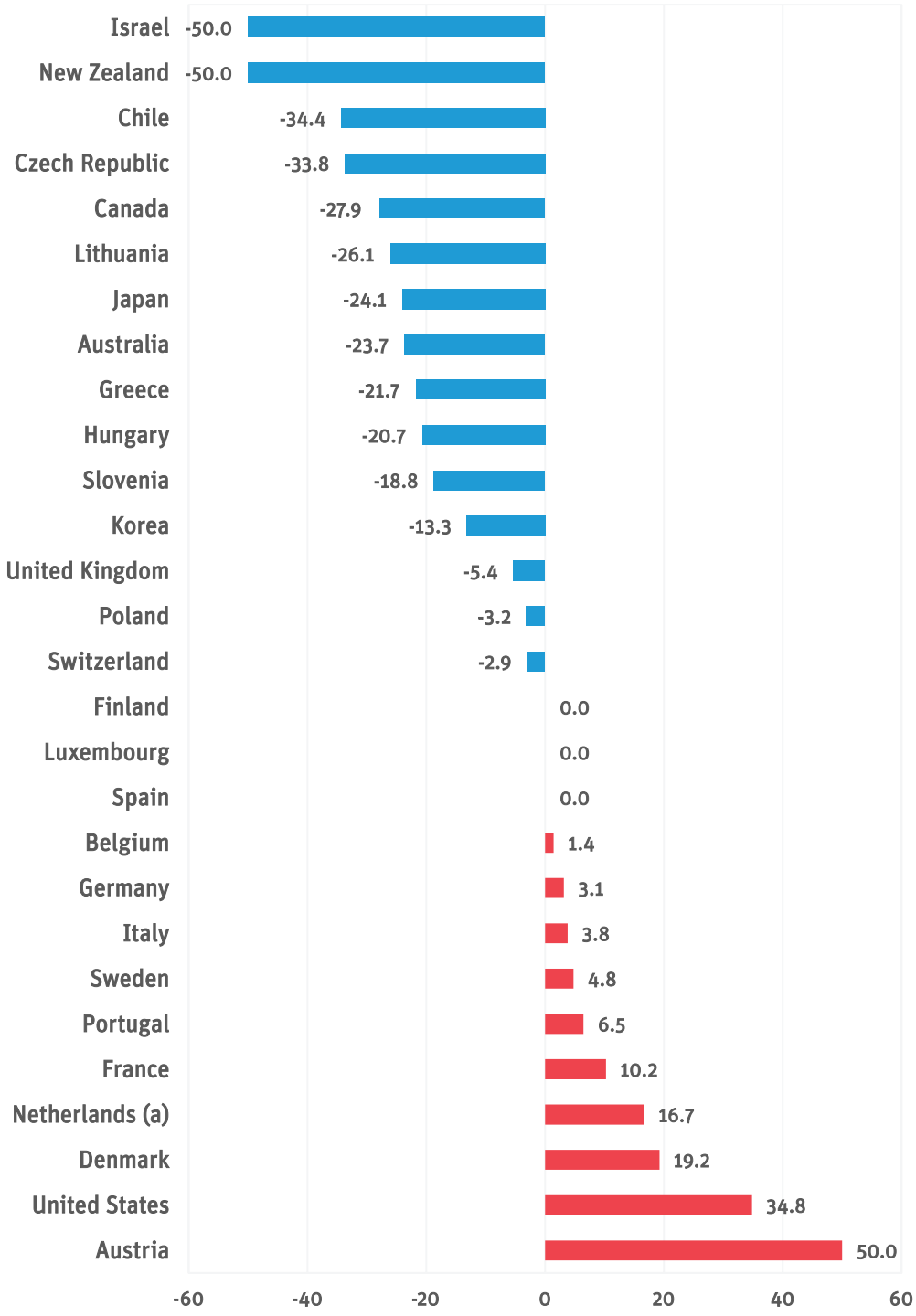
Riders of powered two-wheelers killed 2010-16 Percentage change



Data from Argentina are not available.
Data from Iceland and Luxembourg are not shown since observations are too low to have meaningful percentage changes.
(a) Real data (actual numbers instead of reported numbers by the police).

Cyclist deaths 2010-2016

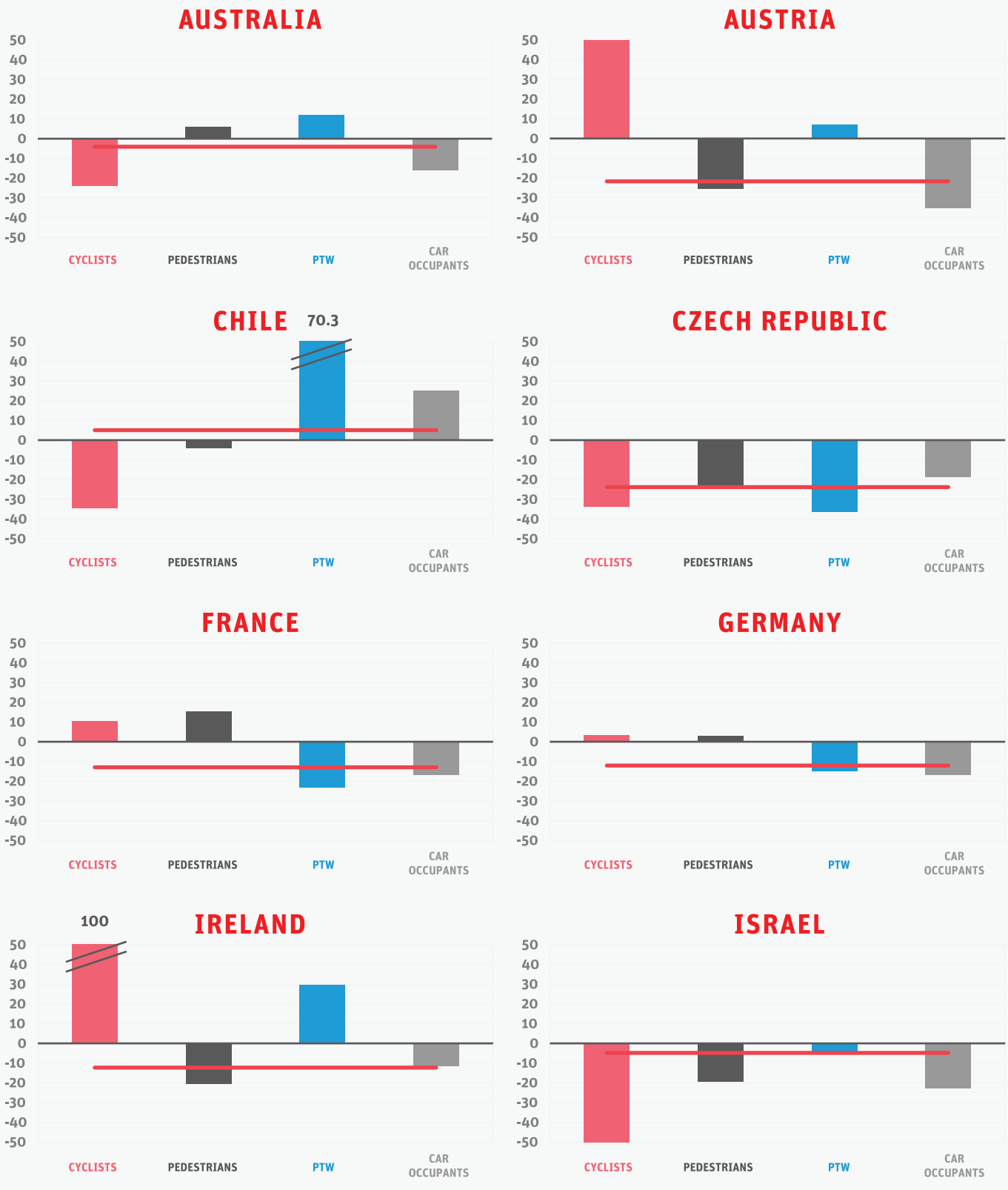
Percentage change

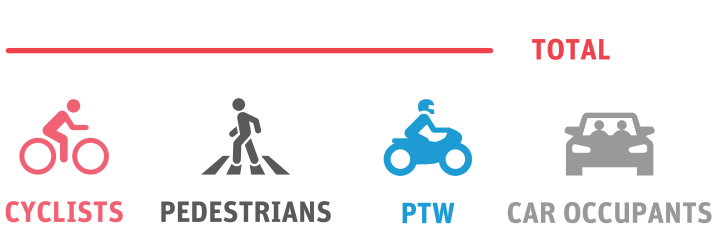


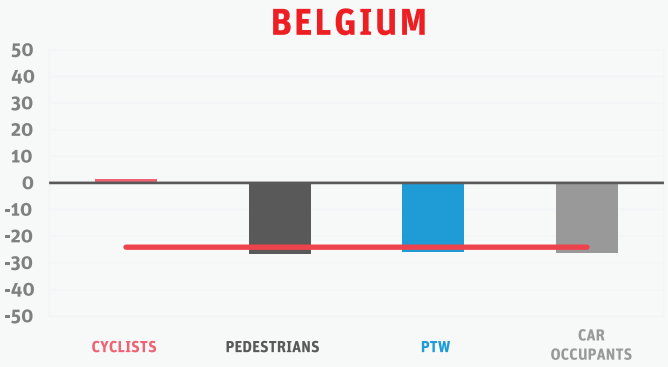
Data from Argentina are not available.
Data from Iceland, Ireland and Norway are not shown since observations are too low to have meaningful percentage changes.
(a) Real data (actual numbers instead of reported numbers by the police).

Road fatalities by different road users

2010-2016 Percentage change




TOTAL
CYCLISTS
PEDESTRIANS
PTW
CAR OCCUPANTS


BELGIUM
50
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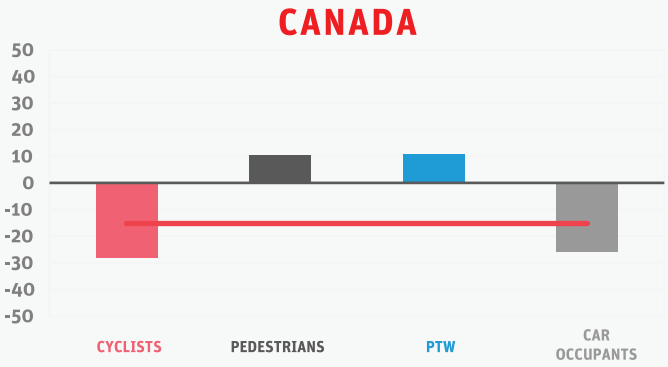
-30
-40
-50
CYCLISTS
PEDESTRIANS
PTW
CAR OCCUPANTS


CANADA
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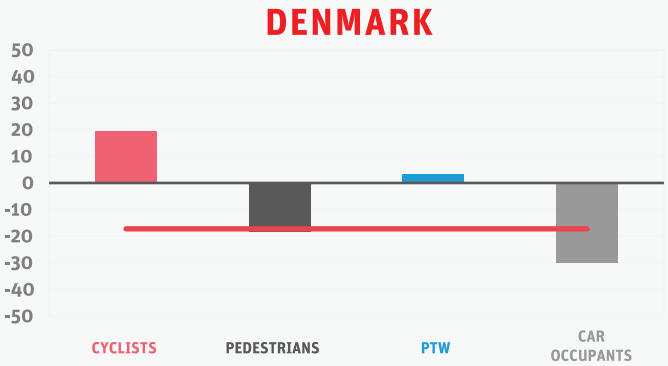
-30
-40
-50
CYCLISTS
PEDESTRIANS
PTW
CAR OCCUPANTS


DENMARK
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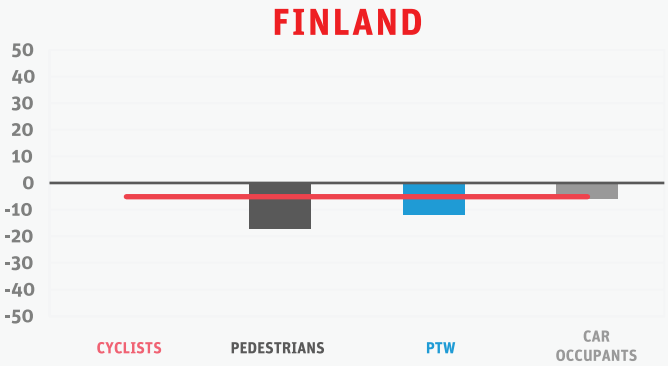
CYCLISTS
PEDESTRIANS
PTW
CAR OCCUPANTS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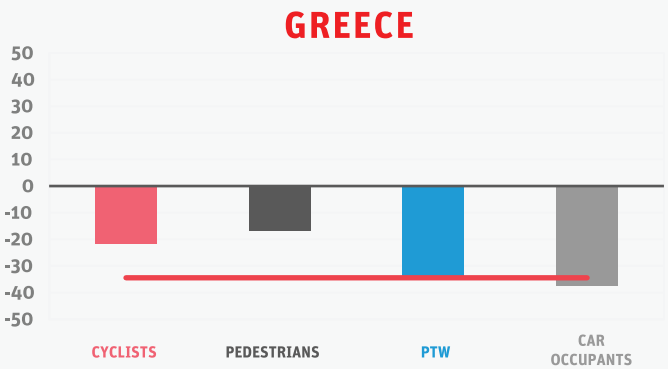
CYCLISTS
PEDESTRIANS
PTW
CAR OCCUPANTS


GREECE
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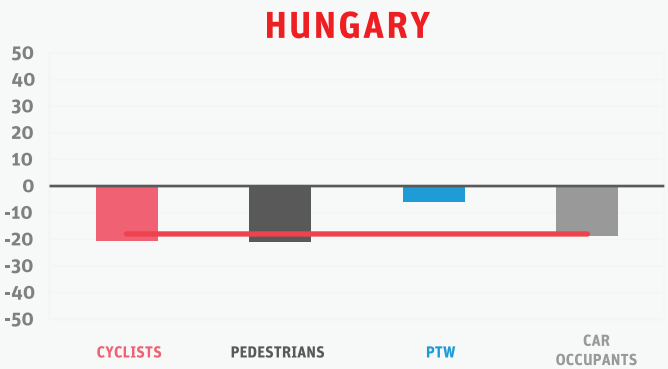
CYCLISTS
PEDESTRIANS
PTW
CAR OCCUPANTS


HUNGARY
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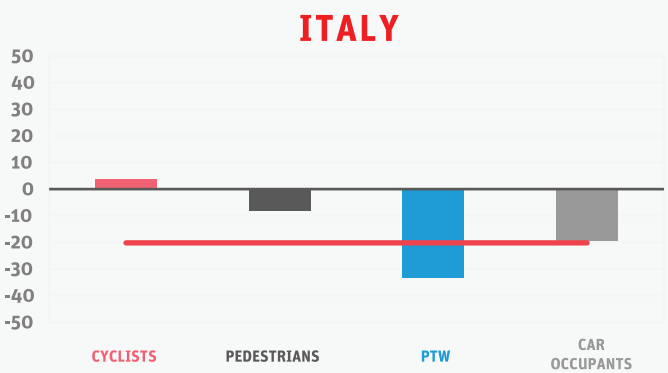
CYCLISTS
PEDESTRIANS
PTW
CAR OCCUPANTS


ITALY
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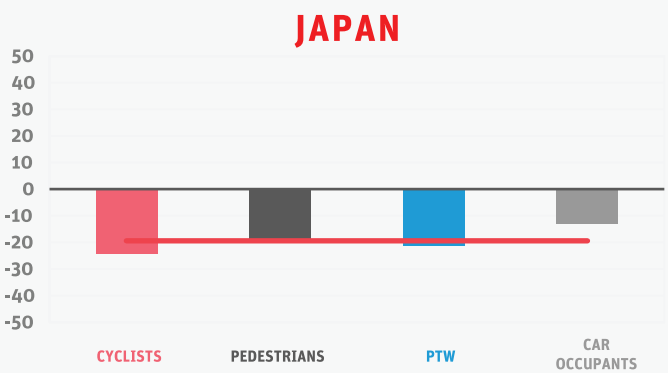
CYCLISTS
PEDESTRIANS
PTW
CAR OCCUPANTS


JAPAN
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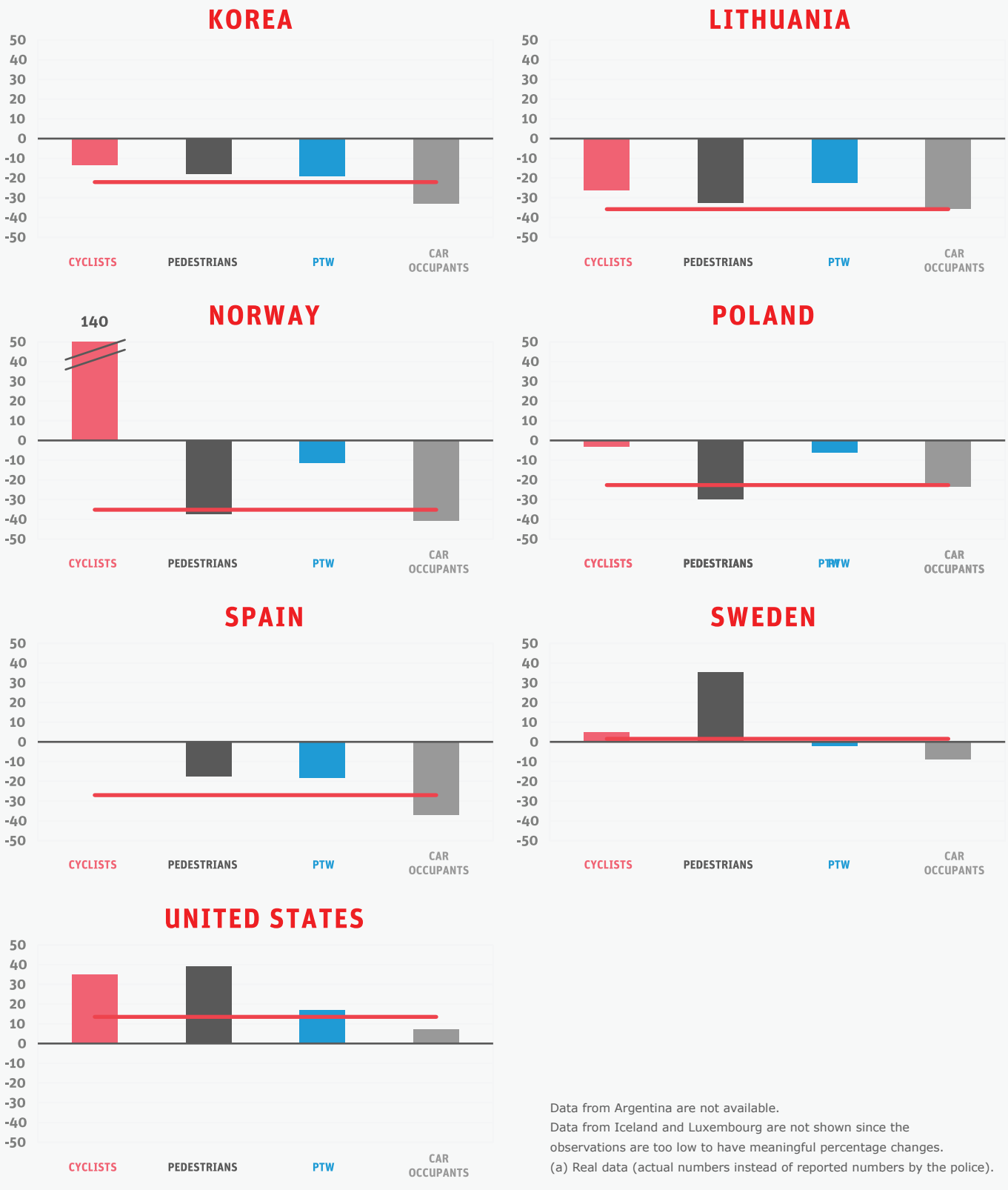
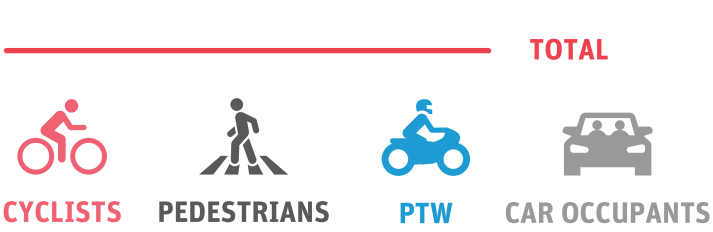
0
-10
-20
-30
-40
-50
CYCLISTS
PEDESTRIANS
PTW
CAR OCCUPANTS

Road fatalities by different road users

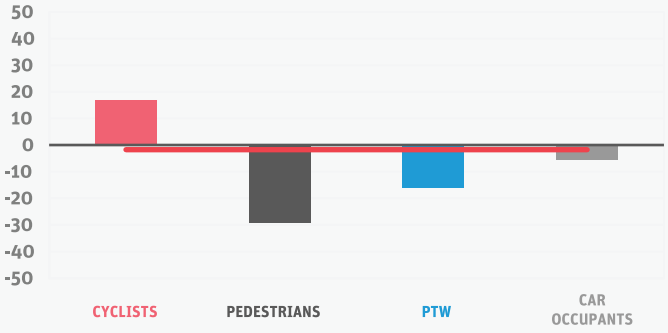
2010-2016 Percentage change



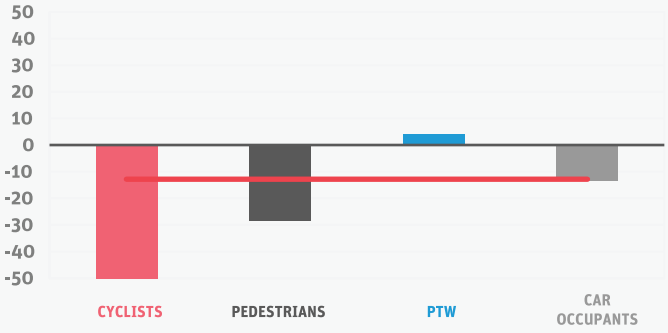
Data from Argentina are not available.
Data from Iceland and Luxembourg are not shown since the observations are too low to have meaningful percentage changes.
(a) Real data (actual numbers instead of reported numbers by the police).



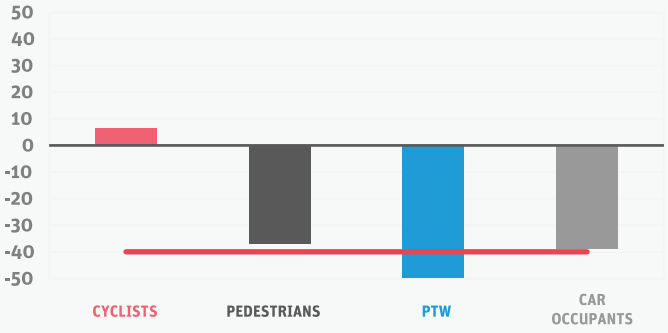
NETHERLANDS [a]



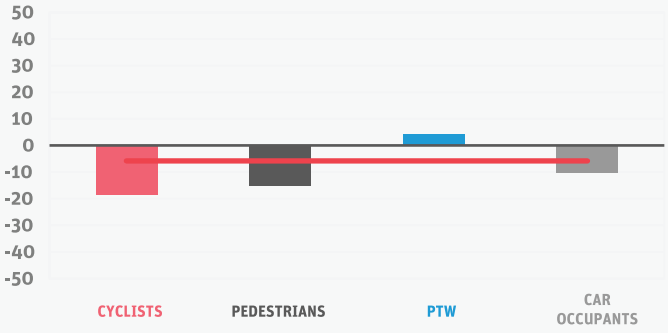
NEW ZEALAND



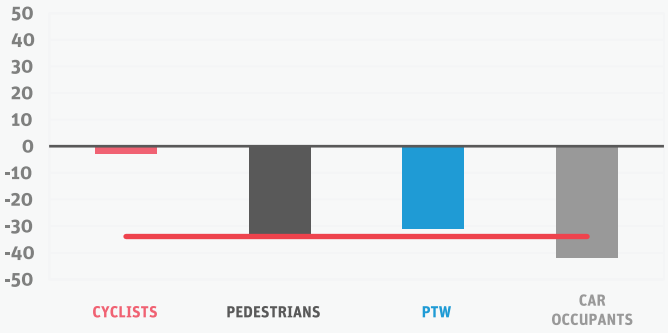
PORTUGAL



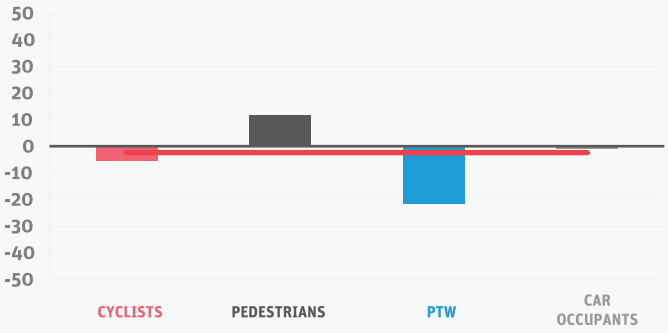
SLOVENIA



SWITZERLAND



UNITED KINGDOM



Age groups

Ensuring road safety for seniors is a key challenge for ageing societies.

The number of people aged 65 years or older has almost doubled between 1994 and 2015 and their share is expected to reach 16% of the world population by 2050 (1994: 6%). More fragile and vulnerable than younger age groups, senior citizens have nonetheless become more mobile than in the past and thus more exposed to traffic risks.

Older road users are particularly at risk in traffic.

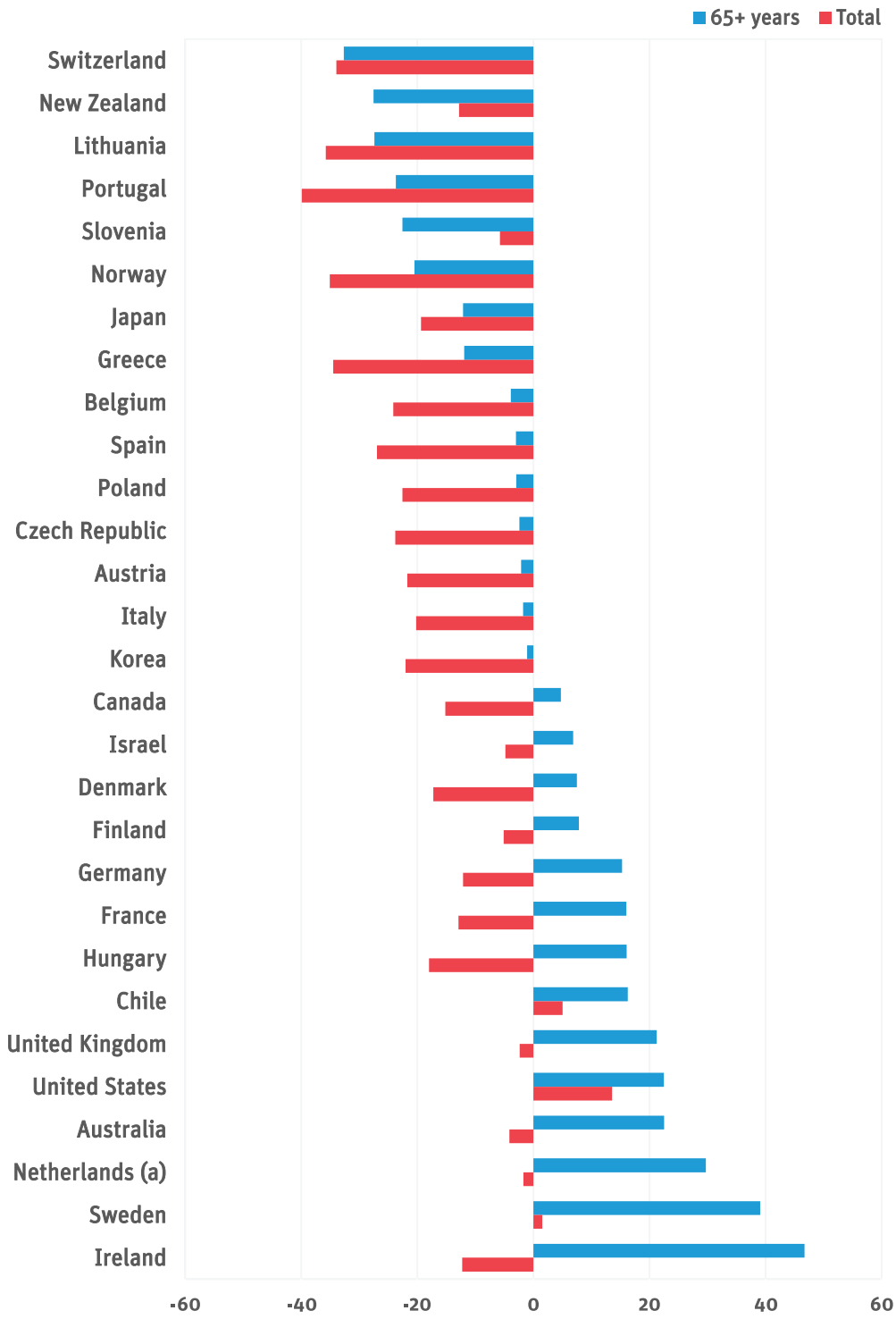
Traffic-related deaths among senior citizens aged 65 or above increased by 6.9% between 2010 and 2016, against the overall decline of road deaths by 3.6%. This is partly due to their increased population share, although this does not explain the phenomenon fully. Fourteen out of 31 IRTAD countries with available data recorded a rise in the number of road deaths among their elderly citizens aged 65 or older. In ten countries, the elderly have the highest mortality rate in traffic of all age groups. In Korea, for instance, seniors had 25.6 road fatalities per 100 000 population, while the national average was 8.4. The risk to die in traffic increases substantially with age. For the 75+ age group, traffic-related mortality rate is much higher than for the 65-74 age group. In Japan, for example, the mortality rate of those aged above 75 is twice that of seniors aged 65-74. In more than half of IRTAD countries, the senior citizens above 75 years are the age group the most at risk in traffic.

Young road users continue to be particularly vulnerable in traffic.

Traffic crashes are the single greatest killer of 15-24 year olds. In most countries, 18-20 year olds have the highest or second-highest traffic related mortality of all age groups. Their risk to die in a road crash is typically twice as high as for the population average. The high crash rates of young drivers in particular can be explained by high-risk behaviour, lack of experience, and lifestyle associated with their age. Males still run higher risks than females, especially in this age group. Typically young males aged 18 to 24 have a mortality rate two to three times higher than young females.

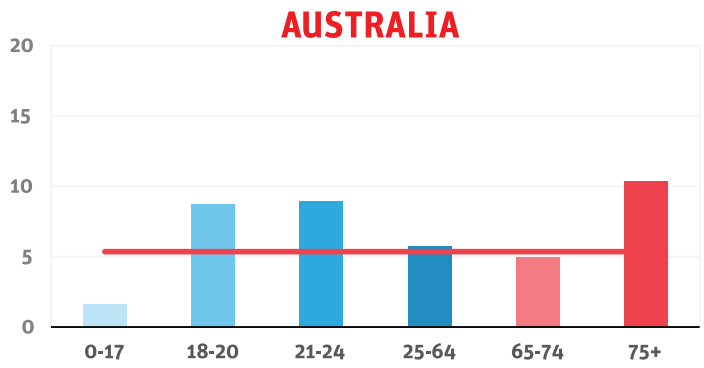
Seniors killed compared to all road users 2010-2016

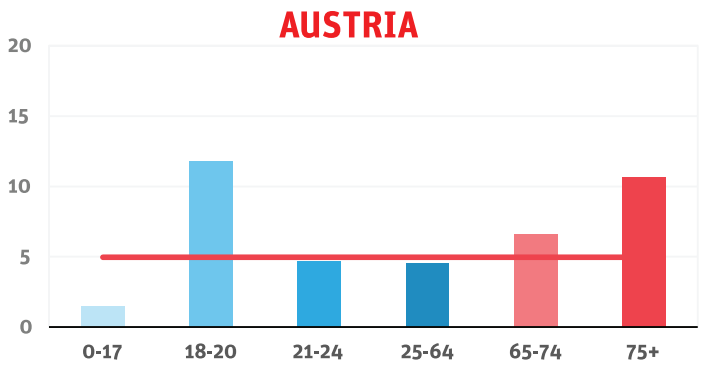
65+ years, percentage change

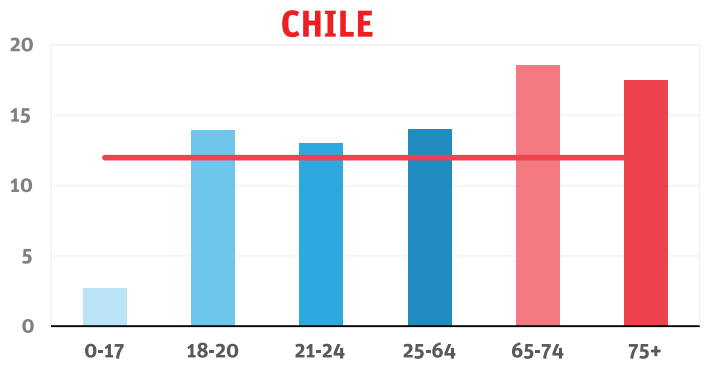


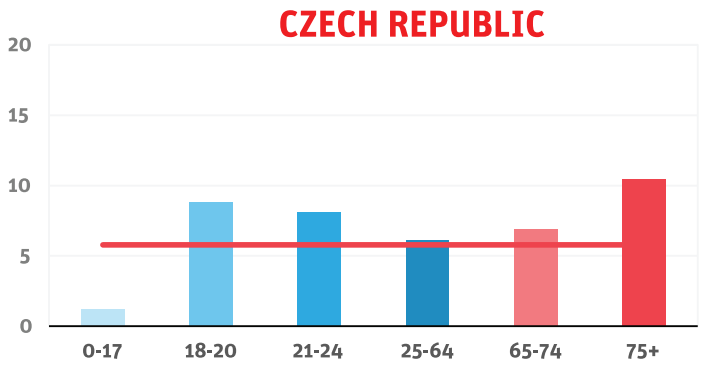
Data from Argentina are not available.
Data from Iceland and Luxembourg are not shown since observations are too low to have meaningful percentage changes.
(a) Real data (actual numbers instead of reported numbers by the police).

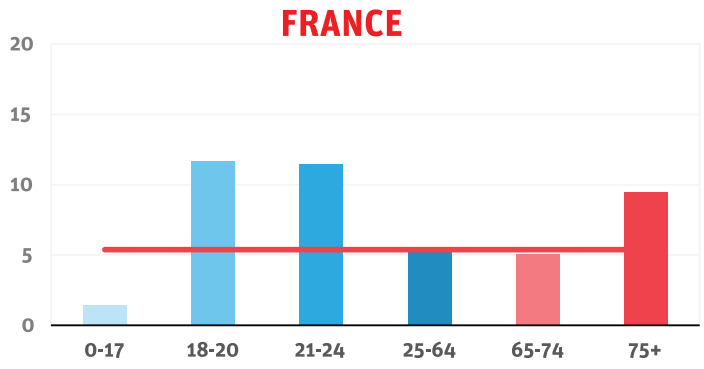
Mortality rate by age group 2016

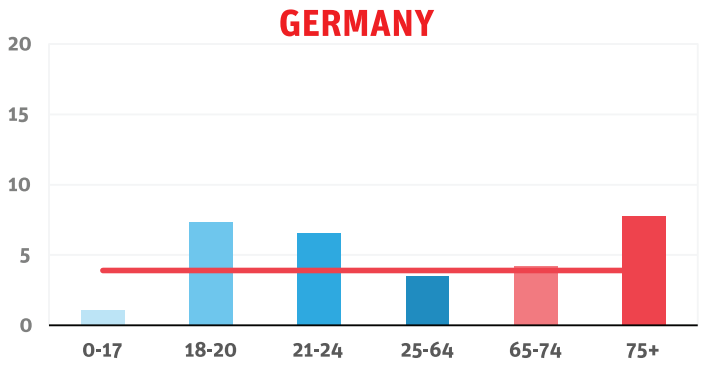


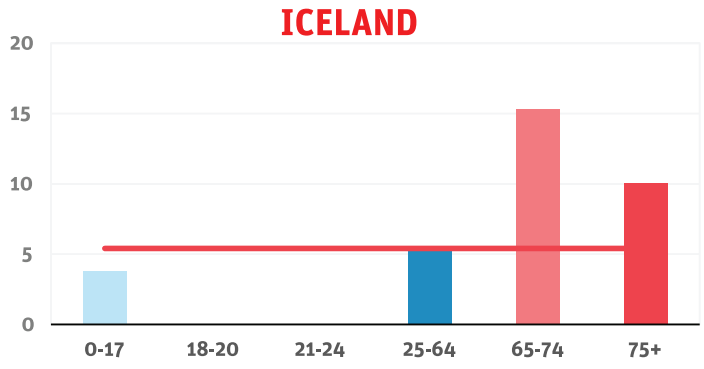


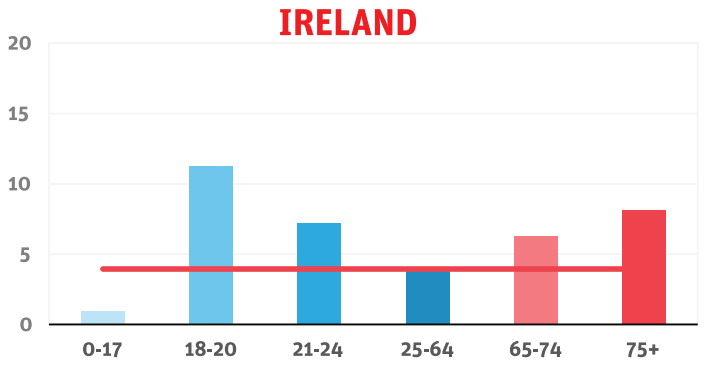


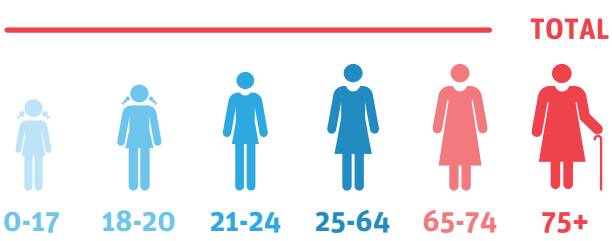




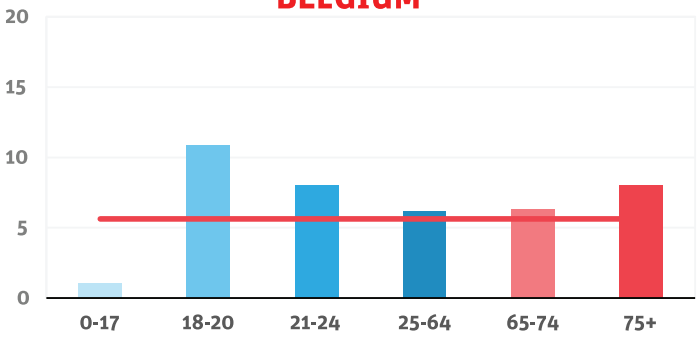




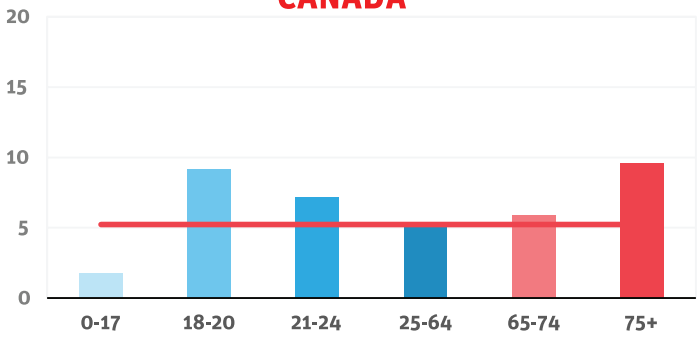




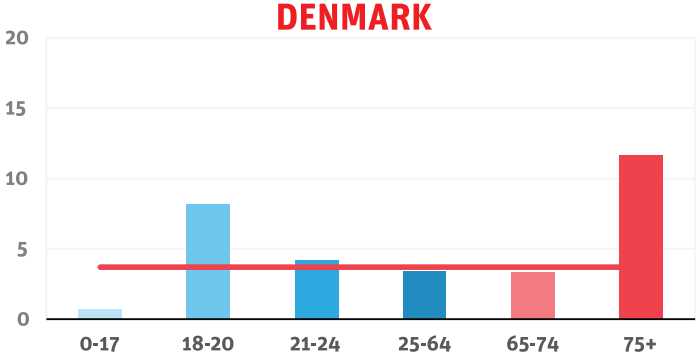
BELGIUM



CANADA



DENMARK



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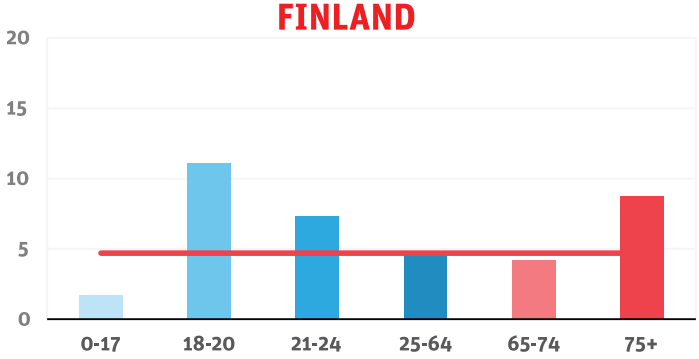

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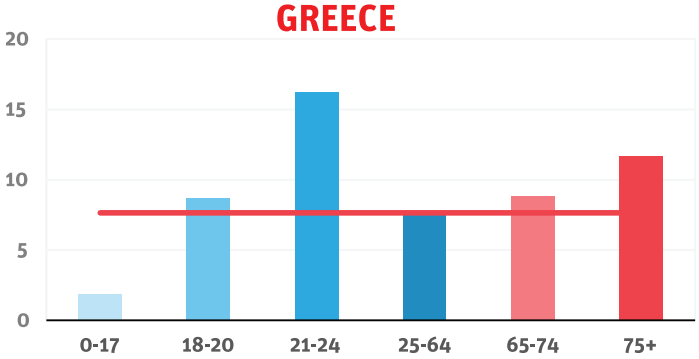

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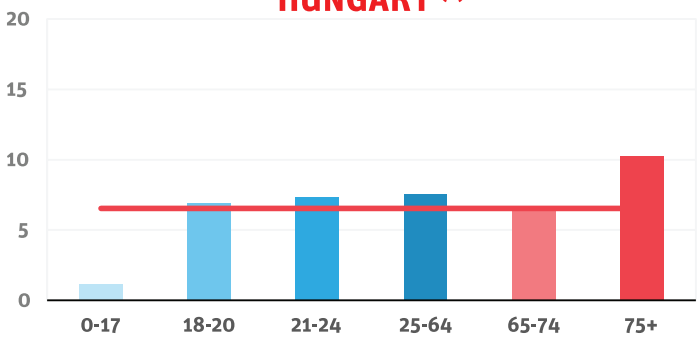

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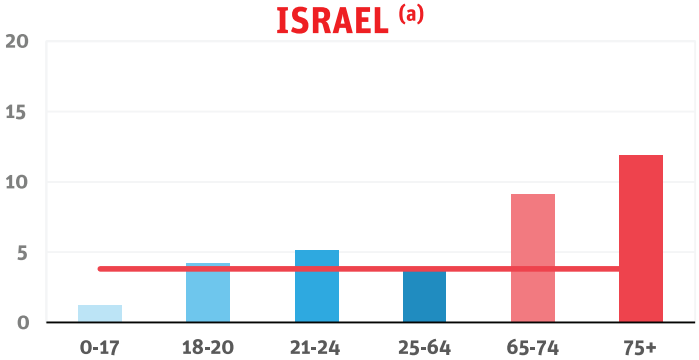

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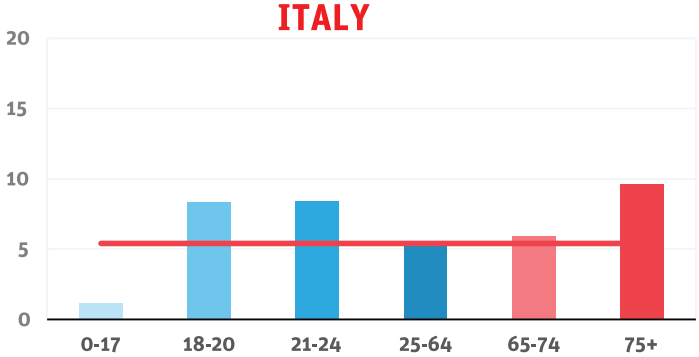
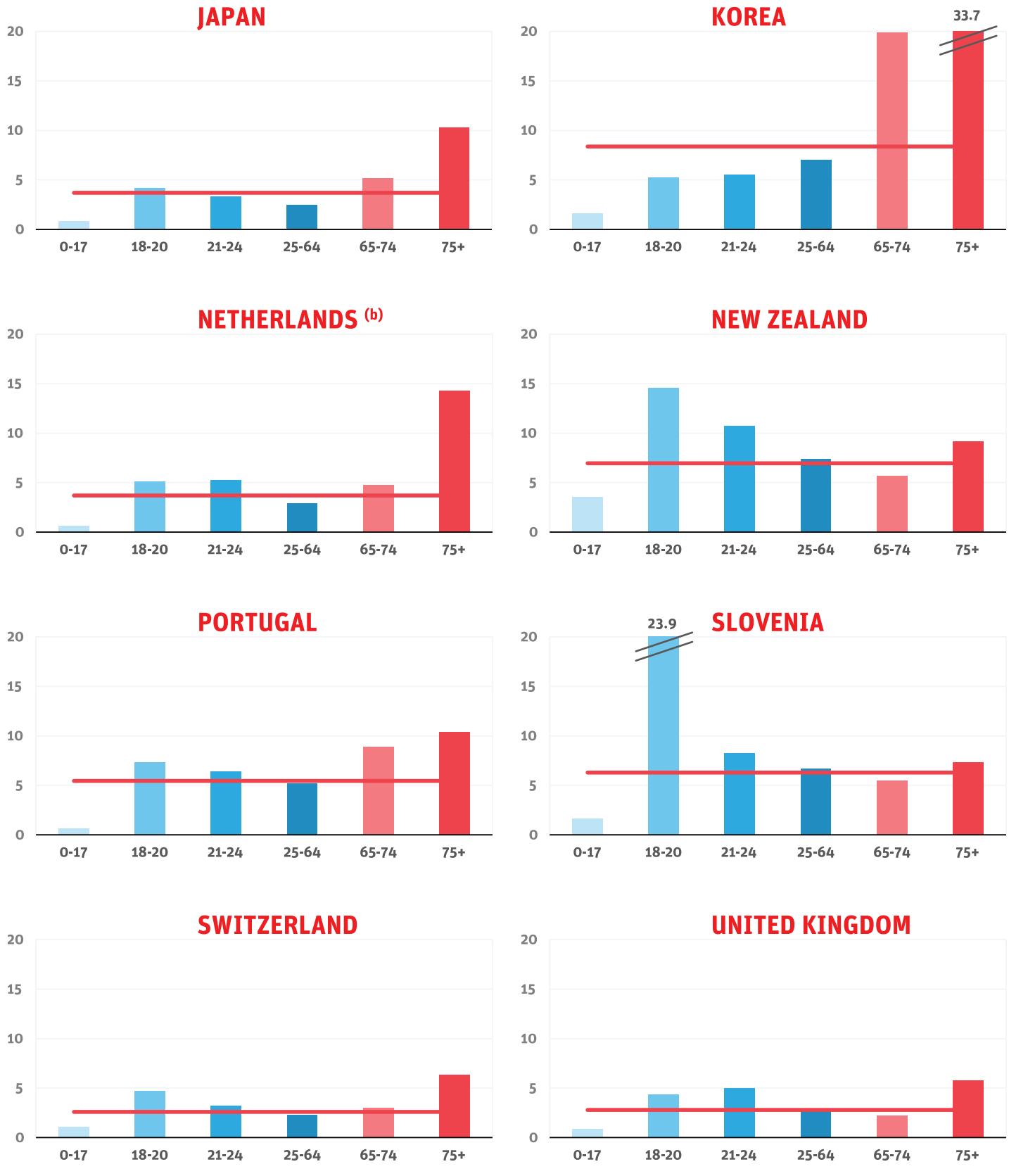
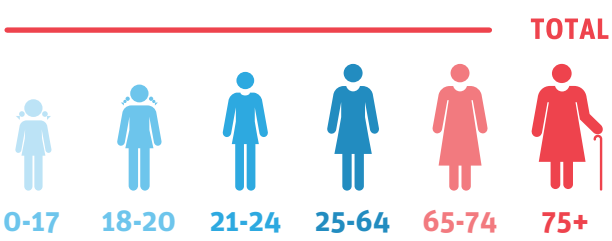


Mortality rate by age group 2016





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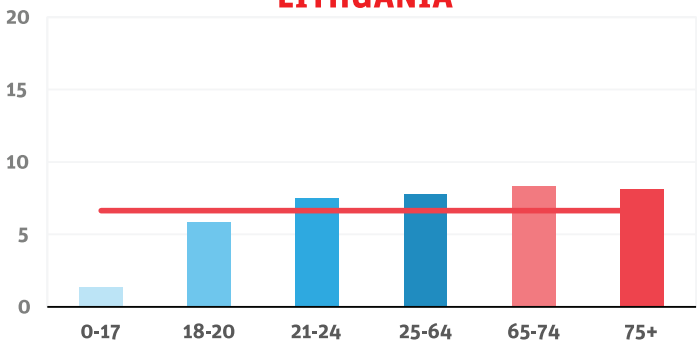

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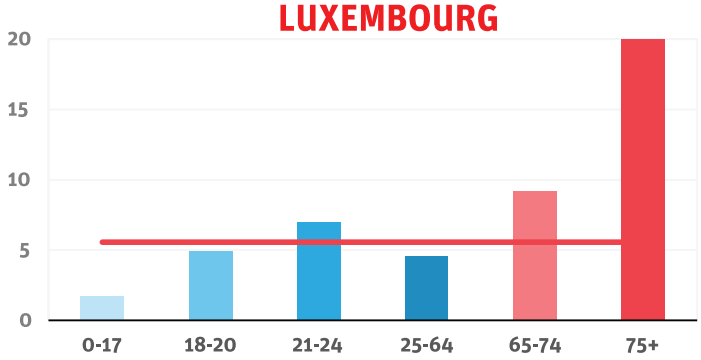

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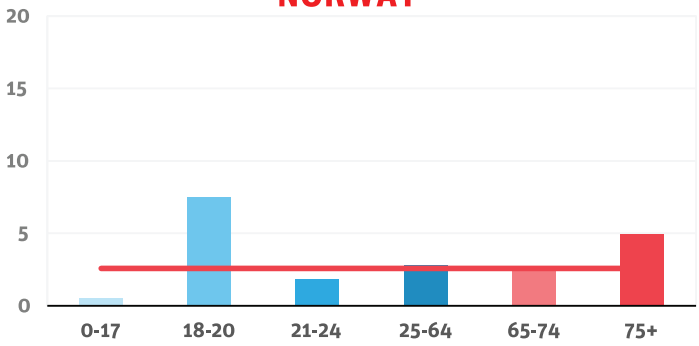

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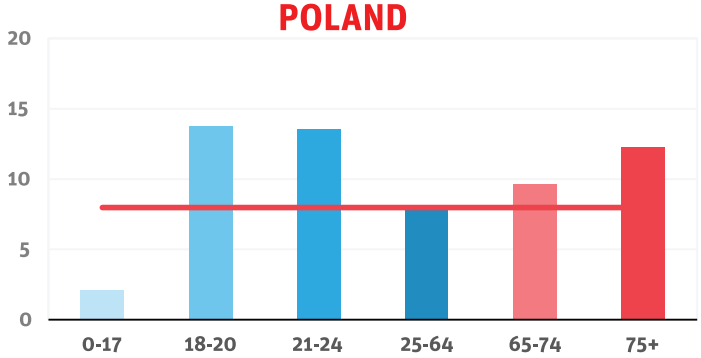

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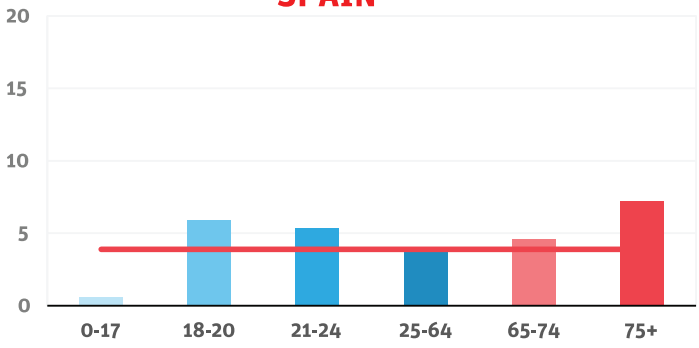

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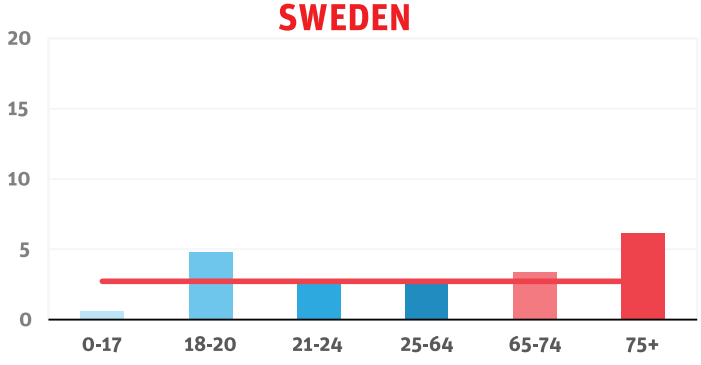
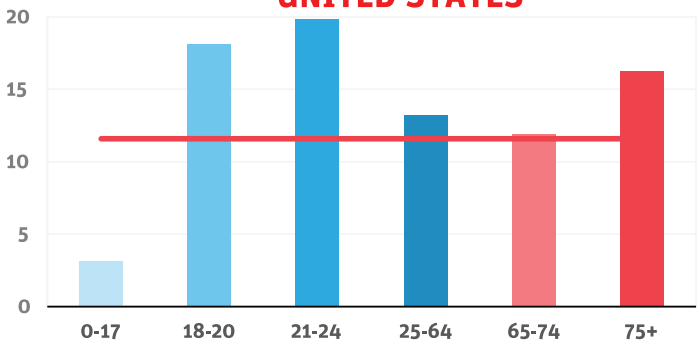


UNITED STATES



Data from Argentina are not available.
(a) 2015 data.
(b) Real data (actual numbers instead of reported numbers by the police).

Road type

Most traffic fatalities occur on rural roads.

Inappropriate and relatively high speeds, the lack of physical separation as well as poor roadsides increase the occurrence and severity of road crashes. In 2016, road fatalities on rural roads represented between almost 40% (in Portugal) and 76% (in New Zealand) of all road deaths. However, it is worth mentioning that in most countries the majority of non-fatal severe crashes occur in urban areas.

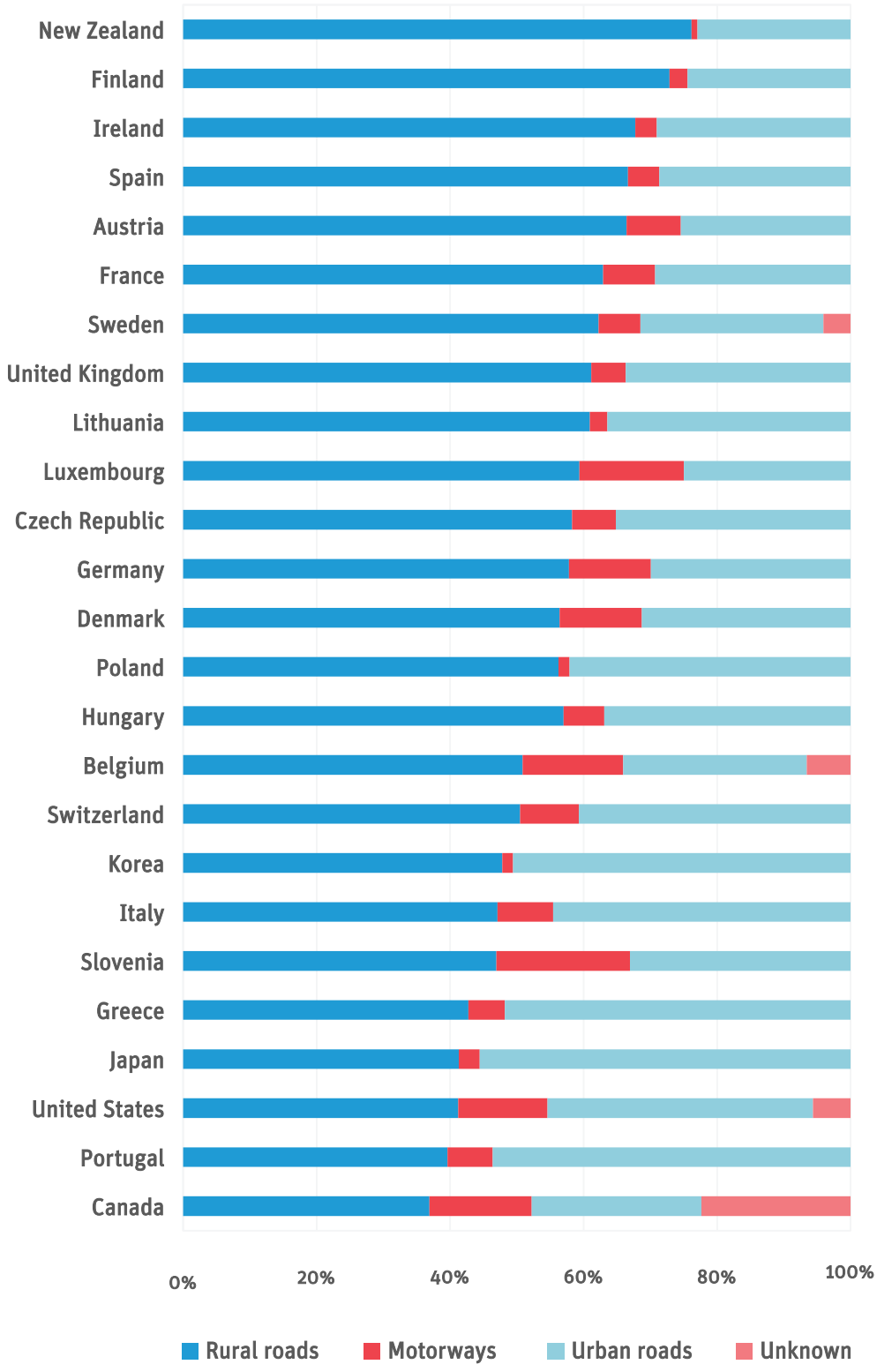
Fatal crashes in urban areas are increasing.

Since 2000, the share of fatalities that occur on city roads has increased in more than half of the IRTAD countries. This trend is particularly prevalent in Greece, Korea and Portugal. In Korea, road deaths in urban areas represented 32% of all fatalities in 2000, rising to 42% in 2010 and 51% in 2016. In Greece, the percentage of urban traffic fatalities rose from 34% in 2010 to 52% in 2016, and in Portugal from 39% to 54%.

Motorways are the safest roads.

In countries for which kilometrage data and fatality data are available by type of road, the risk of dying on motorways is between two to six times smaller than on the whole network.

Traffic deaths by road type
2016



Data from Argentina, Australia, Chile, Iceland, Israel, Netherlands and Norway are not available.

IRTAD Recommendations

Alcohol-related road crashes

Review how data on alcohol-related road crashes is collected

In order to collect more reliable and comparable data on alcohol-related serious road injuries and fatalities, countries should begin by assessing their current status on the recording of data on alcohol-related road fatalities and serious injuries.

Aim for a systematic alcohol testing of every road user actively involved in a serious crash

Ideally, 100% of active road users that are involved in a road crash that resulted in death or serious injury should be tested for alcohol. If a systematic alcohol testing at this level is not possible, countries should apply additional methods for adjusting the official numbers of alcohol-related road fatalities and serious road injuries.

Use statistical analysis methods to better estimate the number of alcohol-related road fatalities

Additional statistical analysis methods can help to obtain closer estimates of alcohol-related serious road crashed. Methods should be developed and applied that align with the legal system and data collection framework of individual countries, rather than harmonise methods internationally.

Harmonise definitions of alcohol related road casualties

To make official country statistics comparable, definitions of alcohol related road casualties should be harmonised. A number of European countries have already adopted the definition proposed by the 2009 SafetyNet project, as "any death occurring within 30 days as a result of a fatal road crash in which any active participant was found with a blood alcohol level above the legal limit". A similar approach should be used to define a person seriously injured in an alcohol related crash, based for example on the severity level of 3+ on the Maximum Abbreviated Injury Scale (MAIS3+), so that it would be defined as "any serious injury at MAIS3+ that occurred as a result of a road crash in which any active participant was found with a blood alcohol level above the legal limit". If countries are unable to apply these recommended definitions, developing algorithms to allow for conversion of these definitions is recommended.

Source: Alcohol-Related Road Casualties in Official Crash Statistics (ITF, 2018)

Speed and crash risks

Inappropriate speed is responsible for 20 to 30% of all fatal road crashes. An analysis between speed and crash risk, reviewing eleven cases from ten countries that have recently changed speed limits or introduced a large-scale automatic speed control confirms a very strong relationship between speed and crash risk and that higher speed is associated with increased occurrence and severity of road crashes.

Reduce the speed on roads as well as speed differences between vehicles

For individuals, the risks of a severe crash might seem small, but from a societal point of view there are substantial safety gains from reducing the mean speeds on roads. Therefore, to reduce road trauma, governments need to take actions to reduce the speed on roads and also speed differences between vehicles sharing the same road.

Set speed limits based on the Safe System principles

The forces a human body can tolerate and still survive must be considered when designing the road system and setting the speed limits. Working towards a Safe System, reasonable speed limits are 30 km/h in built up areas where there is a mix of vulnerable road users and motor vehicle traffic; 50 km/h in areas with intersections and high risk of side collisions; and 70 km/h on rural roads without a median barrier and thus a risk of head-on collisions. In urban areas, speed above 50 km/h is not acceptable. Where motorised vehicles and vulnerable road users share the same space, such as in residential areas, 30 km/h is the recommended maximum.

Implement compensation measures where speed limits are increased

If a speed limit increase is envisaged, stricter enforcement or an upgrade of the infrastructure is recommended to compensate for the increased risk from higher mean speed. Without such compensatory measures, more deaths and injured road users can be expected.

Use automatic speed control to reduce speed effectively

Experience worldwide has proven the effectiveness of automatic speed control systems in reducing speed, and in turn road crash frequency. Section control (using measurement of average speed over a section of road) is a relatively new measure, which seems to be very effective not only in reducing speed but also in contributing to more homogenised traffic flow.

Source: Speed and Crash Risks (ITF, 2018)

Injury data

Traffic fatalities only show the tip of the iceberg.

The number of road deaths is not a sufficient indicator for the level of road safety. The global total of 1.3 million road deaths annually around the world must be seen in the context of an estimated 20 to 50 million serious injuries sustained in crashes every year, according to the World Health Organization. As the wide margin of the estimate suggests, injury data are scarce and often unreliable.

Existing crash data significantly understate crash injuries.

Information on injuries is usually compiled from police records of crashes. These tend to under-report injuries and therefore so do official crash statistics, making them in most cases inadequate to analyse the nature and consequences of serious injury crashes. Hospital records are more accurate and should be used to complement police data. This is standard practice in very few countries, notably the Netherlands, Spain and Sweden. However, most IRTAD countries are working to improve injury data collection. Hospital data often lacks information on the mechanisms of the crash and the road user category. Because the definition of what constitutes a serious injury (as well as methodologies for counting them) vary widely among countries, international comparisons of serious injury crashes are not reliable. For these reasons, this comparative report does not present injury data. However, serious injury data are available for those countries that collect them in the online country profiles that complement this report at https://www.itf-oecd.org/road-safety-annual-report-2018.

The number of serious injuries from road crashes is decreasing at a much slower pace.

Compared to the drop in the the number of fatalities, serious injuries have declined far less rapidly, based on the data that is available. This is significant because many survivors of severe crashes do not recover completely and often suffer a grave reduction in their quality of life. Crash injuries also reduce productivity and, ultimately, a nation's economic performance. The socio-economic costs of road crashes for the European Union are estimated at least above EUR 500 billion 3% of the EU's GDP.[3] Most of these costs are related to serious injuries.

Serious injury crashes may follow different patterns.

Crashes that cause severe injuries may unfold in other ways than fatal ones and therefore may require different countermeasures, studies have suggested. This is the case specifically for serious injury crashes in urban areas involving vulnerable road users that are significantly over-represented among all serious traffic injuries and underrepresented in police statistics - a pattern that is less visible when looking only at fatality data.[4]

Collecting comparable serious injury data is a challenge.

The IRTAD Group has proposed a common definition of "serious injury" based on the Abbreviated Injury Scale (AIS). It defines a serious injury as one with a Maximum AIS score of 3 or more (MAIS 3+). The IRTAD Group also encourages its members to set up mechanisms for a combined analysis of police and hospital data.

3 Wijnen, W. et al. (2017), Crash cost estimates for European countries, Delivery 3.2 of the H2020 project SafetyCube

4 Elvik, R., Updated Estimates of the Relationship between Business Cycle and Traffic Fatalities (ITF, forthcoming)

The Marrakech Declaration

on better safety data for better road safety outcome

On 10-12 October 2017, international road safety experts from more than 40 countries met at the 6th International IRTAD conference in Marrakech (Morocco) to discuss issues related to the collection and analysis of road safety data as a critical tool to design effective road safety policies.

The participants agreed on the following recommendations:

1 Reliable road safety data are essential to understand, assess and monitor the nature and magnitude of the road safety problem and the related solutions, to set ambitious and achievable safety targets, to design and implement effective safety policies and measure their effectiveness. Improvement made to the quality of road safety data will improve the quality of data driven policy decisions.

2 It is essential to clearly identify data needed for road safety analysis and decision making. A minimum set of road safety data is required to analyse road safety. It is recommended that road safety data is collected at three levels:

- **Final outcome data**, including the number of persons killed and injured by type of road users, location and time.

- **Data on road Safety Performance Indicators** (SPIs), focusing on the safety performance of vehicles, road infrastructure and post-crash care and road user behaviours. Regarding the latter, the following are a minimum set of SPIs: speed; seatbelt wearing and use of child restraint systems; helmet wearing by users of powered two-wheelers; drinking and driving.

- **Contextual data**, including risk exposure data such as: population, motorisation, traffic volume by type of road users and road types, and personal mobility by means of transport, as well as background cultural information.

3 Underreporting of road crashes and casualties is a significant problem and all countries are invited to address this issue explicitly. This requires improving data quality from the police and comparing these with data from other sources (hospitals and coroners in particular).

4 Fatality data are not sufficient to understand road safety problems fully. Information on injury crashes is essential for a more complete picture of road safety. IRTAD supports the definition of a "seriously injured road casualty" as a person with injuries assessed at level 3 or more on the Maximum Abbreviated Injury Scale i.e. "MAIS3+", which can be derived from the International Classification of Diseases (ICD). It is recommended to further study the impact of different levels of injuries on the quality of life and health losses - lifelong disability as an example.

5 Road safety data should be aggregated at national and regional/provincial level, analysed and published by a (lead) national agency. The agency should be able to monitor road safety performances, based on key indicators, and provide objective assessments of progress and impacts of interventions to those in charge of designing and implementing a road safety strategy.

6 In several countries, a road safety observatory, under the auspices of a lead road safety agency or a lead ministry, is in charge of data collection and analysis. This model has proven to be a good institutional setting to raise the profile of road safety and encourage policy actions.

7 Regular monitoring and analysis of key road safety risk factors (for example: speeding, drinking and driving, non-wearing of seatbelts or helmets, non-respect of traffic rules, distraction/inattention, fatigue, etc.) should be undertaken. The results of monitoring should be made publicly available at regular intervals and used, if appropriate, to adapt the road safety strategies in place and promote safer behaviours.

8 In order that meaningful international comparisons and exchange of best practices can be done the international community should work towards:

- **harmonisation of data**, including common definitions on the main indicators. Many countries have now adopted the 30 day definition to define a fatality; other countries are strongly encouraged to do the same.

- **the development of common methodologies** to collect data on Safety Performance Indicators (SPIs) and exposure data. Results of this will allow for meaningful international comparisons and the exchange of best practices.

9 Benchmarking between countries, and also between regions and cities, is a useful methodology to generate dynamics and strengthen motivations for road safety improvement by identifying strong and weak points in road safety and by doing so to learn from each other. Countries are encouraged to share their data and to co-operate within international initiatives.

10 The Regional Observatory established in Latin America (OISEVI) has proven its effectiveness in raising road safety on the political agenda, creating emulation between countries and facilitating exchange of best practices. Consideration should be given to create regional observatories in other regions worldwide. An African road safety observatory, under the form of a network of country representatives, would be instrumental in improving road safety data in African countries and foster co-operation.

Strategies and targets

Road safety has been recognised as a global health emergency.

In light of almost 1.3 million road deaths every year, the United Nations launched the Decade of Action for Road Safety 2011-20, with the goal of first stabilising and then reducing the predicted rise in the number of worldwide road deaths. The Global Plan for the Decade of Action provides five key pillars of action: road safety management, safer infrastructure, safer vehicles, safer road user behaviour and improved post-crash response.

Road safety is included in the UN Sustainable Development Goals.

Adopted in 2015, the SGDs include under Goal 3 ("Good Health and Well-Being") Target 3.6 which posits to "by 2020, halve the number of global deaths and injuries from road traffic accidents". The ambition to halve road traffic deaths and injuries by 2020 is significantly stronger than the original aim of the UN Decade of Action "to stabilize and then reduce" road traffic fatalities. Road safety is also evoked as part of Goal 11 ("Sustainable Cities and Communities"). Goal 11.2 sets as target to "by 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons."

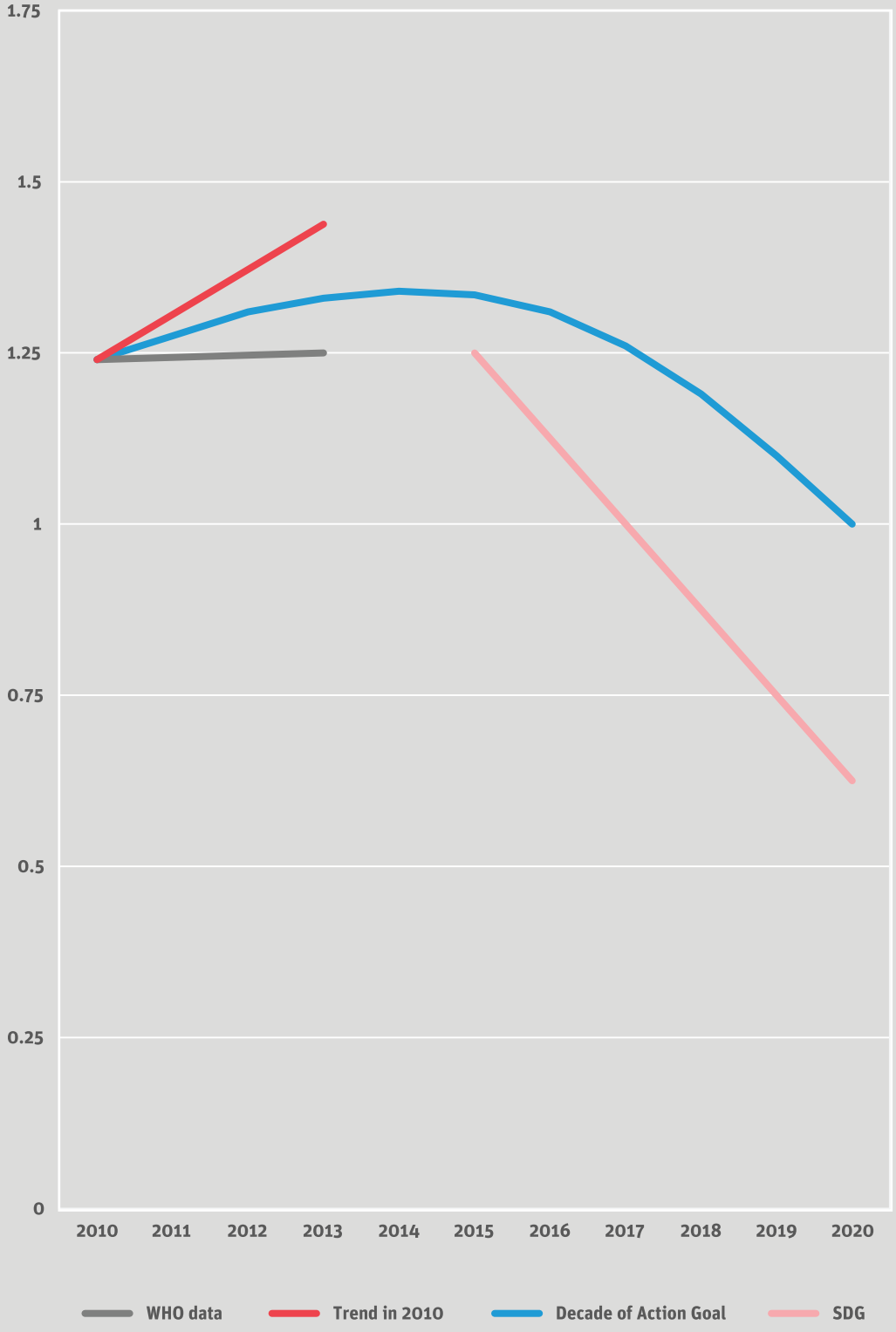
Expressing its concern that the SDG target to halve the number of road deaths by 2020 will not be met at the current rate of progress, the UN General Assembly called on member countries to take additional steps to improve road safety. The Assembly explicitly endorsed twelve voluntary global performance targets for road safety risk factors and service delivery mechanisms adopted by UN member states in 2017 through a process facilitated by the WHO, UNECE, UNICEF and the World Bank.

The new UN Road Safety Trust Fund.

Established in April 2018, the Trust Fund aims to close the funding gap in road safety. Around 90% of crash deaths occur in poorer countries that often cannot afford important road safety measures. The Fund provides financial resources to strengthen the capacity of government agencies, local governments and city authorities to develop and implement road safety programmes and will prioritize projects in low- and middle-income countries.

UN Decade of Action Goals and Sustainable Development Targets

(million road deaths)



Strategies and targets

A new EU action plan for road safety 2020-2030.

A ten-year action plan launched by the European Commission in May 2018 includes new vehicle safety standards, revised rules on infrastructure safety management and a strategy on automated driving safety, among other things. Overall, it will be guided by the Safe System approach and include a target to halve road deaths and serious injuries by 2030.

National road safety strategies are in place.

Almost all IRTAD member and observer countries have now adopted or developed road safety strategies. Some of these strategies are inspired by the United Nation's Global Plan for the Decade of Action for Road Safety 2011-2020. Table 4 provides an overview of national strategies and targets, as well as those currently in place on an international level. Detailed information on national policies is given in the country chapters available at https://www.itf-oecd.org/road-safety-annual-report-2018.

UN voluntary road safety performance targets

1 By 2020, all countries establish a comprehensive multisectoral national road safety action plan with time-bound targets.

2 By 2030, all countries accede to one or more of the core road safety-related UN legal instruments.

3 By 2030, all new roads to achieve technical standards for all road users that take into account road safety, or meet a three star rating or better.

4 By 2030, more than 75% of travel on existing roads is on roads that meet technical standards for all road users that take into account road safety.

5 By 2030, 100% of new (defined as produced, sold or imported) and used vehicles meet high quality safety standards, such as the recommended priority UN Regulations, Global Technical Regulations, or equivalent recognized national performance requirements.

6 By 2030, halve the proportion of vehicles travelling over the posted speed limit and achieve a reduction in speed-related injuries and fatalities.

7 By 2030, increase the proportion of motorcycle riders correctly using standard helmets to close to 100%.

8 By 2030, increase the proportion of motor vehicle occupants using safety belts or standard child restraint systems to close to 100%.

9 By 2030, halve the number of road traffic injuries and fatalities related to drivers using alcohol, and/or achieve a reduction in those related to other psychoactive substances.

10 By 2030, all countries have national laws to restrict or prohibit the use of mobile phones while driving.

11 By 2030, all countries to enact regulation for driving time and rest periods for professional drivers, and/or accede to international/regional regulation in this area.

12 By 2030, all countries establish and achieve national targets in order to minimize the time interval between road traffic crash and the provision of first professional emergency care.

Main challenges

1 Speed management is a critical element of any road safety strategy.

Reducing speed is essential to reduce the frequency and severity of road crashes. Setting and enforcing appropriate speed limits is essential to reduce the number of road deaths. The default speed limit for passenger cars in urban areas in most IRTAD countries is 50 km/h. Lower speed limits are often in force in residential areas or around schools; typically 30 km/h. Higher default speed limits in urban areas (60 km/h) are found in Chile, Korea and in Poland during night time.

On non-motorway roads outside built-up areas, speed limits typically vary between 80 km/h and 100 km/h. The lowest speed limits for rural roads among IRTAD member countries and observers exist in Jamaica (50 km/h) and Japan (50 or 60 km/h). The highest non-urban speed limits are found in Chile and Poland, where speeds of up to 120 km/h are legal. Several countries differentiate speed limits according to the type of road, weather or pavement conditions and the presence of a separation between both directions of traffic.

On motorways speed limits vary between 90 km/h and 140 km/h. In Germany, there is no general speed limit. Instead there is a maximum recommended speed of 130 km/h, and local speed limits apply on a large part of the motorway network (see Table 6).

2 Setting and enforcing limits for drivers on blood alcohol content (BAC) prevents drink-driving crashes.

All IRTAD member and observer countries have established general BAC levels. The most common maximum authorised BAC level is 0.5 g/l. However, limits vary between 0.0 g/l in the Czech Republic and Hungary to 0.8 g/l in Canada, Jamaica, Malaysia, the United Kingdom (excluding Scotland) and the United States. Most of the countries also apply lower BAC levels for novice, young and professional drivers (see Table 5).

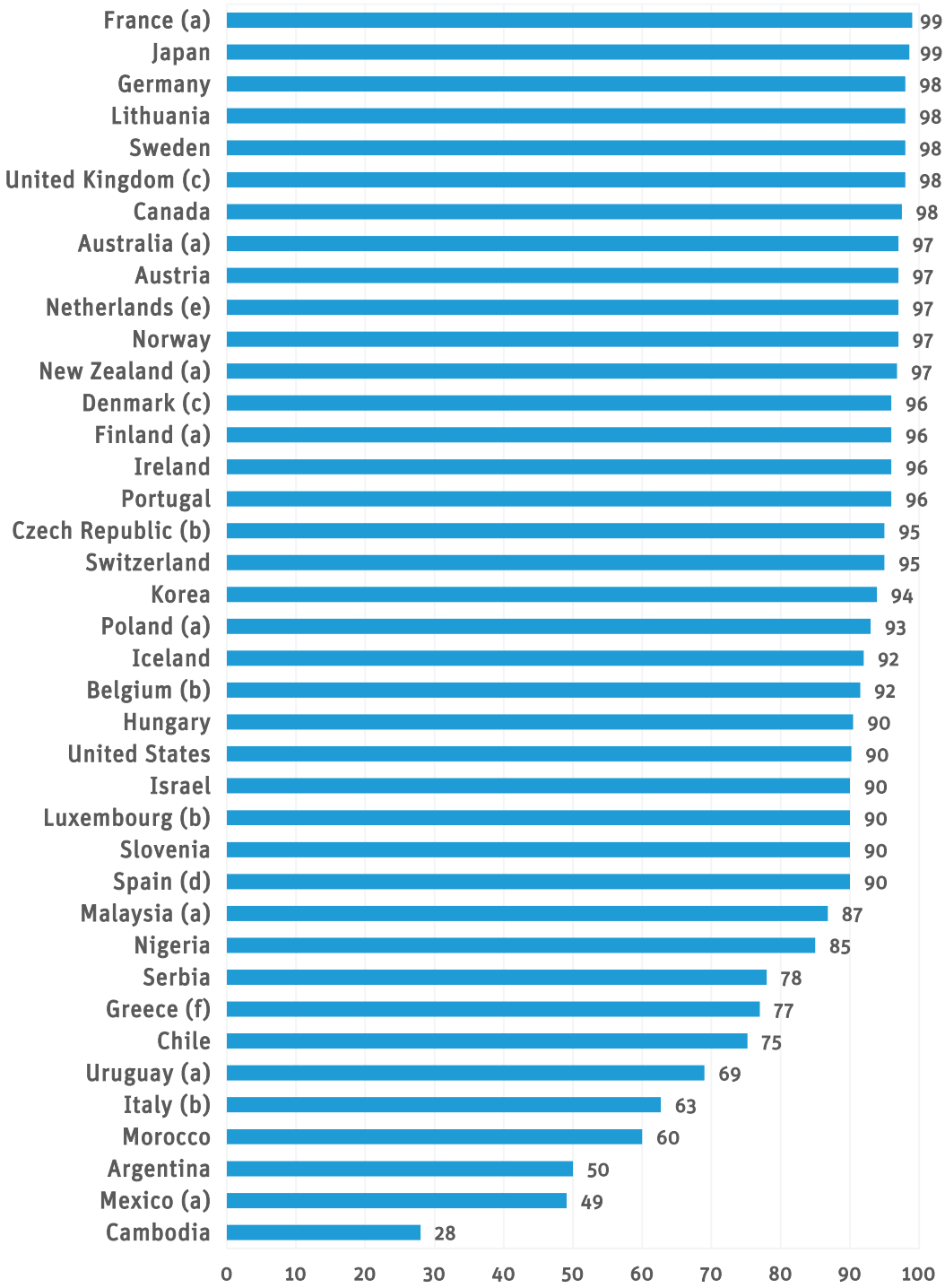
3 Seat belts are among the most effective tools to save the lives of vehicle occupants

Using seatbelts also reduces the severity of injuries in the case of a crash. All IRTAD countries mandate the wearing of seat belts in front seats. The use of seatbelts on rear seats is still not mandatory on the whole road network in Cambodia, Morocco and the United States (see Table 7). In the United States, seatbelt use is mandatory in 49 of 50 states, with New Hampshire being the exception. In 15 states seatbelt use is governed by a secondary law, which means drivers cannot be stopped for not using seatbelt if they have not committed any other offence.

4 Helmets protect a particularly fragile and critical body part of users of two-wheelers.

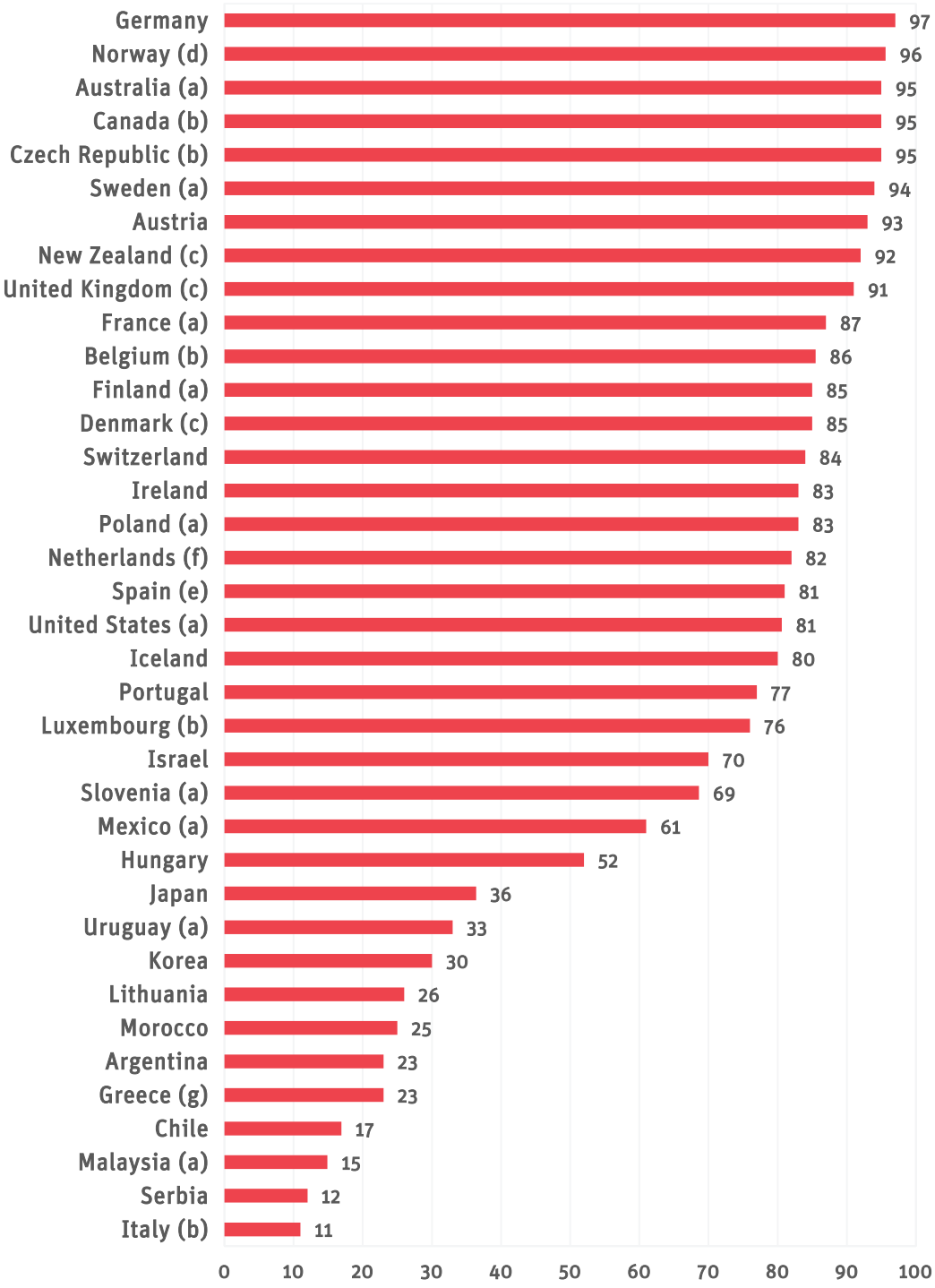
Motorcyclists, moped riders and cyclists are already among the most vulnerable road users in a crash. In all IRTAD member and observer countries except the United States, the use of helmets on powered two-wheelers (motorcycles and mopeds) is compulsory. The helmet wearing rate is generally high, with many countries reporting nearly 100% compliance for motorcyclists. In the United States, there is no federal law on helmet use, and three U. S. states, Colorado, Illinois and Iowa, do not have any helmet law. Helmet use for cyclists is not compulsory in most countries; however the compulsory use of helmets by cycling children is becoming more frequent (see Table 8).

Seatbelt wearing rates in front seats 2017 or latest available year



Data based on national surveys and not on a common international methodology.
Data for Colombia and Jamaica are not available.
(a) 2016 data.
(b) 2015 data.
(c) 2014 data.
(d) 2012 data.
(e) 2010 data.
(f) 2009 data.

Seatbelt wearing rates rear seats 2017 or latest available year



Data based on national surveys and not on a common international methodology.
Data for Cambodia, Colombia and Jamaica are not available.
(a) 2016 data.
(b) 2015 data.
(c) 2014 data.
(d) 2013 data.
(e) 2012 data.
(f) 2010 data.
(g) 2009 data.

Takeaways

How can countries reduce the number of road deaths more effectively and quickly? A wide range of road safety interventions of proven effectiveness exist. The countries that achieve the best results in reducing road deaths are putting them into practice, and those countries aiming to reduce the death toll on their roads should look to these best performers for inspiration and practical lessons.

All countries should adopt a Safe System approach.

The plateauing of past downward trends in some well-performing countries suggests that tried and tested approaches to reduce traffic fatalities may be reaching the limits of their effectiveness. A step change is needed to create a new live-saving dynamic. The Safe System offers such a perspective: centred on forgiving errors and containing crash energy levels below the limits that cause catastrophic harm, this systematic and integrated way of dealing with crash risk in the road system promises opportunities to unlock higher levels of safety for all road users.

Basic road safety standards need to be legislated and enforced.

Even with a shift to Safe System thinking, priorities remain to: ensure appropriate speeds, foster seatbelt and helmet use, and act against drink-driving. Not all countries covered in this report currently require the use of seatbelts in rear seats, and seatbelt use is very low in some countries. For both seatbelt use and helmet wearing, all countries should target a 100% use rate.

A strong positive correlation exists between speed and crash risk.

This connection has been again reconfirmed by a recent IRTAD report (see Speed and Crash Risk, ITF 2018). In light of the undeniable link, it calls for a reduction in speeds to lower the number and severity of road crashes, suggests a review of whether current speed limits are appropriate, and demands continuous and strong enforcement of speed limits.

Drink-driving remains a significant cause of crashes.

In most countries, little progress has been achieved in reducing the share of crashes that result from alcohol-induced impairments. These maintain a stable share of around 20-30% as a cause of fatal crashes. The role of alcohol in road crashes is significantly underreported in many countries, as another recent IRTAD report established (see Alcohol-Related Road Casualties in Official Crash Statistics, ITF 2018). Collecting better data on the role of alcohol in road crashes will help countries to address this persistent problem more effectively.

Recessions tend to be associated with a more rapid drop in road deaths.

This was the case following the 2008 economic downturn. Yet governments should be mindful that the opposite can also apply: when economic growth returns, traffic fatalities may increase. The fall in traffic deaths during a period of economic difficulty should not be misinterpreted as a sign that road safety policies can be given lower priority. Reducing traffic fatalities must remain high on the agenda even during times when there seems to be faster progress in reducing fatalities than normal. Otherwise, there is a high risk of setbacks when economic growth returns.

The lack of data on serious injuries hampers road safety research and analysis.

While there is satisfactory knowledge around fatal crashes, information about serious injury crashes is very limited in most countries. The scarce data available lacks comparability between countries. Better insights into crash scenarios and any specific patterns that lead to serious injury crashes are indispensable to move towards the long-term objective of no deaths or serious injuries in a Safe System road environment.

Table 1. **Road fatality data** 2017 compared to 2016

Country	2017 road deaths	Data status	2016 road deaths	% change
Countries with validated data				
Argentina	5 300	provisional	5 530	-4.2
Australia	1 227	provisional	1 296	-5.3
Austria	413	provisional	427 (a)	-3.3
Belgium	620	estimate	637	-2.7
Canada	..	..	1 898	..
Chile	1 928	final	2 178	-11.5
Czech Republic	577	final	611	-5.6
Denmark	183	provisional	211	-13.3
Finland	212	provisional	258	-17.8
France	3 456	provisional	3 477	-0.6
Germany	3 177	provisional	3 206	-0.9
Greece	739	provisional	824	-10.3
Hungary	624	final	607	2.8
Iceland	16	final	18	-11.1
Ireland	158	provisional	186	-15.1
Israel	321	final	335	-4.2
Italy	1 623	provisional for Jan-Jun	1 510	7.5
Japan	4 431	final	4 698	-5.7
Korea	4 182	provisional	4 292	-2.6
Lithuania	192	final	192	0.0
Luxembourg	25	final	32	-21.9
Netherlands (c)	613	final	629	-2.5
New Zealand	380	final	327	16.2
Norway	106	provisional	135	-21.5
Poland	2 831	final	3 026	-6.4
Portugal	592	provisional	563	5.2
Slovenia	104	final	130	-20.0
Spain	..	provisional for fatalities with 24 hours	..	3.0
Sweden	254	provisional	270	-5.9
Switzerland	230	final	216	6.5
United Kingdom	1 286	provisional for Jan-Sep	1 372	-6.3
United States	37 150	estimation	37 461	-0.8
Observers and accession countries (b)				
Cambodia	..	..	1 852	..
Colombia	6 479	provisional	6 806 (a)	0.0
Jamaica	321	final	379	-15.3
Malaysia	6 740	final	7 152	-5.8
Mexico	..	..	16 185	..
Morocco	3 499	provisional	3 593 (a)	-2.6
Serbia	579	provisional	607	-4.6
South Africa	14 050	final	14 071	-0.1
Uruguay	470	final	446	5.4

(a) 2016 provisional data for comparative purposes with 2017 data. These data can differ from the 2016 final data shown in the other tables and graphs.
(b) Data as provided by the countries and not validated by IRTAD.
(c) Real data (actual numbers instead of reported numbers by the police).

Table 2. **Overview: Road fatality trends** 2010-2016

Country	Road fatalities							2016 % change from		Annual average change
	2016	2015	2014	2013	2012	2011	2010	2015	2010	2016-10
Countries with validated data										
Argentina	5 550	..	5 279	5 209	5 074	5 040	5 094	..	9.0	1.4
Australia	1 296	1 206	1 151	1 185	1 299	1 277	1 352	7.5	-4.1	-0.7
Austria	432	479	430	455	531	523	552	-9.8	-21.7	-4.0
Belgium	637	732	727	724	770	861	840	-13.0	-24.2	-4.5
Canada	1 898	1 870	1 846	1 951	2 075	2 023	2 238	1.5	-15.2	-2.7
Chile	2 178	2 140	2 119	2 110	1 980	2 045	2 074	1.8	5.0	0.8
Czech Republic	611	737	688	654	742	773	802	-17.1	-23.8	-4.4
Denmark	211	178	182	191	167	220	255	18.5	-17.3	-3.1
Finland	258	270	229	258	255	292	272	-4.4	-5.1	-0.9
France	3 477	3 461	3 384	3 268	3 653	3 963	3 992	0.5	-12.9	-2.3
Germany	3 206	3 459	3 377	3 339	3 600	4 009	3 648	-7.3	-12.1	-2.1
Greece	824	793	795	879	988	1 141	1 258	3.9	-34.5	-6.8
Hungary	607	644	626	591	605	638	740	-5.7	-18.0	-3.2
Iceland	18	16	4	15	9	12	8	12.5	125.0	14.5
Ireland	186	162	193	188	163	186	212	14.8	-12.3	-2.2
Israel	335	322	279	277	263	341	352	4.0	-4.8	-0.8
Italy	3 283	3 428	3 381	3 401	3 753	3 860	4 114	-4.2	-20.2	-3.7
Japan	4 698	4 885	4 838	5 165	5 261	5 535	5 828	-3.8	-19.4	-3.5
Korea	4 292	4 621	4 762	5 092	5 392	5 229	5 505	-7.1	-22.0	-4.1
Lithuania	192	242	267	258	301	296	299	-20.7	-35.8	-7.1
Luxembourg	32	36	35	45	34	33	32	-11.1	0.0	0.0
Netherlands (a)	629	621	570	570	650	661	640	1.3	-1.7	-0.3
New Zealand	327	319	293	253	308	284	375	2.5	-12.8	-2.3
Norway	135	117	147	187	145	168	208	15.4	-35.1	-7.0
Poland	3 026	2 938	3 202	3 357	3 571	4 189	3 908	3.0	-22.6	-4.2
Portugal	563	593	638	637	718	891	937	-5.1	-39.9	-8.1
Slovenia	130	120	108	125	130	141	138	8.3	-5.8	-1.0
Spain	1 810	1 689	1 688	1 680	1 903	2 060	2 478	7.2	-27.0	-5.1
Sweden	270	259	270	260	285	319	266	4.2	1.5	0.2
Switzerland	216	253	243	269	339	320	327	-14.6	-33.9	-6.7
United Kingdom	1 860	1 804	1 854	1 770	1 802	1 960	1 905	3.1	-2.4	-0.4
United States	37 461	35 485	32 744	32 893	33 782	32 479	32 999	5.6	13.5	2.1
Observers and accession countries (b)										
Cambodia	1 852	2 231	2 226	1 950	1 966	1 905	1 816	-17.0	2.0	0.3
Colombia	7 158	6 831	6 352	6 211	6 131	5 773	5 670	4.8	26.0	4.0
Costa Rica	..	..	662	625	655	576	574	..	..	..
Jamaica	379	382	331	307	260	308	319	-0.8	18.8	2.9
Malaysia	7 152	6 706	6 674	6 915	6 917	6 877	6 872	6.7	4.1	0.7
Mexico	16 185	16 039	15 886	15 853	17 102	16 615	16 559	0.9	-2.3	-0.4
Morocco	3 785	3 776	3 489	3 832	4 167	4 222	3 778	0.2	0.2	0.0
Serbia	607	599	536	650	688	731	660	1.3	-8.0	-1.4
South Africa	14 071	12 944	12 702	11 844	12 211	13 954	13 967	8.7	0.7	0.1
Uruguay	446	506	538	567	510	572	556	-11.9	-19.8	-3.6

(a) Real data (actual numbers instead of reported numbers by the police).
(b) Data as provided by the countries and not validated by IRTAD.

Table 3. **Overview: Road deaths since 1990**

per 100 000 inhabitants, per billion vehicle-km and per 10 000 registered motor vehicles

	Road fatalities per 100 000 inhabitants				Road fatalities per billion VKT				Road fatalities per 10 000 registered vehicles			
	1990	2000	2010	2016	1990	2000	2010	2016	1990	2000	2010	2016
Countries with validated data												
Argentina	..	..	12.6	12.7	..	..	..	..	..	..	2.9	2.6
Australia	13.7	9.5	6.1	5.4	..	9.8	5.9	5.2	2.3	..	0.8	0.7
Austria	20.4	12.2	6.6	5.0	32.0	15.0	7.3	5.1	3.7	1.8	0.9	0.7
Belgium (c)	19.9	14.4	7.7	5.6	28.1	16.3	8.5	7.3	4.3	2.6	1.3	0.9
Canada	14.3	9.5	6.6	5.2	..	9.3	6.7	5.1	2.3	1.6	1.0	0.8
Chile	..	..	12.1	12.0	..	..	..	..	..	10.6	6.3	4.5
Czech Republic	12.5	14.5	7.7	5.8	48.3	36.7	16.2	11.5	3.3	3.2	1.3	0.9
Denmark (c)	12.3	9.3	4.6	3.7	17.3	10.7	5.6	3.9	3.1	2.1	0.9	0.7
Finland	13.0	7.7	5.1	4.7	16.3	8.5	5.1	5.1	2.8	1.5	0.7	0.6
France	19.8	13.7	6.4	5.4	26.7	15.6	7.1	5.8	3.6	2.3	1.0	0.8
Germany	14.2 (d)	9.1	4.5	3.9	19.7(d)	11.3	5.2	4.2	2.5 (d)	1.4	0.7	0.6
Greece	20.3	18.7	11.2	7.6	..	..	..	..	..	3.1	1.3	0.9
Hungary (c)	23.4	11.7	7.4	6.2	..	..	..	..	11.2	4.4	2.0	1.5
Iceland	9.5	11.5	2.5	5.4	14.9	13.8	2.5	4.9	..	1.8	0.3	0.6
Ireland	13.6	11.0	4.7	3.9	19.2	11.5	4.5	3.8	4.5	2.5	0.9	0.7
Israel	8.7	7.1	4.6	3.9	22.4	12.4	7.1	5.9 (b)	4.1	2.5	1.4	1.0 (e)
Italy	12.6	12.4	7.0	5.4	..	..	..	..	2.1	1.6	0.8	0.6
Japan	11.8	8.2	4.6	3.7	23.2	13.4	8.0	6.4	1.9	1.2	0.6	0.5
Korea	33.1	21.8	11.3	8.4	..	49.5	18.7	13.8	..	..	..	1.7
Lithuania	29.3	18.3	9.5	6.6	..	..	..	..	12.7	5.0	1.4	1.2
Luxembourg	18.7	17.5	6.4	5.6	..	..	..	..	3.3	2.4	0.8	0.7
Netherlands (b)	..	7.3	3.9	3.8	..	9.2	5.1	4.7	..	1.4	0.7	0.6
New Zealand	21.4	12.0	8.6	7.0	..	13.6	9.4	7.2	3.3	1.8	1.2	0.9
Norway	7.8	7.6	4.3	2.6	12.0	10.5	4.9	3.0	1.4	1.2	0.6	0.3
Poland (c)	19.3	16.4	10.2	8.0	..	..	..	..	8.1	4.5	1.8	1.1
Portugal (c)	29.3	20.0	8.9	5.4	..	..	..	..	13.4	4.3	1.6	1.0
Slovenia	25.9	15.8	6.7	6.3	65.1	26.7	7.7	7.0	..	..	1.0	0.9
Spain	23.3	14.4	5.3	3.9	..	..	..	..	5.1	2.2	0.7	0.5
Sweden	9.1	6.7	2.8	2.7	12.0	8.5	3.5	3.3	1.7	1.2	0.5	0.4
Switzerland	13.9	8.3	4.2	2.6	18.6	11.2	5.4	3.2	2.2	1.2	0.6	0.4
United Kingdom	9.4	6.1	3.0	2.8	..	7.4	3.8	..	2.1	1.2	0.5	0.5
United States	17.9	14.9	10.7	11.6	12.9	9.5	6.9	7.3	2.4	1.9	1.3	1.3
Countries with validated data (a)												
Cambodia	..	..	12.7	11.9	..	..	..	..	..	..	..	..
Colombia	..	..	11.4	14.1	..	..	..	..	..	..	6.7	5.1
Costa Rica	..	..	12.7	..	..	..	..	..	..	..	..	..
Jamaica	..	..	..	13.9	..	..	..	..	..	..	9.4	9.6
Malaysia	..	25.9	24.0	22.9	..	..	16.2	..	..	5.7	3.4	2.6
Mexico	..	13.9	14.5	13.2	..	..	..	27.5	..	9.0	5.2	3.8
Morocco (c)	11.5	12.7	11.8	10.7	..	..	..	..	29.0	21.7	13.5	10.0
Serbia	..	13.9	9.0	8.6	..	..	..	..	..	..	3.6	2.7
South Africa	..	..	27.9	25.0	..	..	..	..	..	..	..	..
Uruguay (c)	..	..	16.6	12.8	..	..	..	..	..	..	3.4	1.9

(a) Data as provided by the countries and not validated by IRTAD.
(b) Real data (actual numbers instead of reported numbers by the police).
(c) Mopeds are not included in the registered vehicles.
(d) 1991 data.
(e) 2015 data.

Table 4. **Road safety strategies and targets**

International Strategies	Vision	Targets
United Nations Decade of Action for Road Safety 2011-2020		Stabilise and then reduce the forecasted level of road traffic fatalities around the world by increasing activities conducted at the national, regional and global levels
Global Plan for the Decade of Action		
Sustainable Development Goals		SDG targets to halve road deaths by 2020 and to improve road safety in cities • Goal 3.6 (health): By 2020, halve the number of global deaths and injuries from road traffic accidents • Goal 11.2 (cities): By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons 12 voluntary global performance targets for road safety risk factors and service delivery mechanisms (see text for details)
European Union Policy Orientations on Road Safety 2011-2020	Towards Zero	50% reduction in fatalities by 2020 compared to 2010
Road Safety Action Programme 2020-2030		

Country/Strategy/ Timeframe	Vision	Targets
Argentina National Road Safety Strategy 2016-2026	Based on the UN Global Plan for the Decade of Action for Road Safety	20% reduction in fatalities by 2021 and a 30% reduction by 2026 compared to 2016 Several sub-targets on seatbelt wearing rates, child restraint usage and helmet use
Australia National Road Safety Strategy (NRSS) 2011-2020	Safe System No-one should be killed or seriously injured on Australia's roads	At least a 30% reduction in fatalities by 2020 compared to the average for 2008-2010 At least a 30% reduction in severely injured by 2020 compared to the average for 2008-2010
Austria Austrian Road Safety Programme 2011-2020	Safe system Become one of the five safest countries in Europe	50% reduction in fatalities by 2020 compared to the average for 2008-2010 (Interim target: 25% reduction by 2015) 40% reduction in serious injuries by 2020 compared to the average for 2008-2010 (Interim target: 20% reduction by 2015) 20% reduction in injury accidents by 2020 compared to the average for 2008-2010 (Interim target: 10% reduction by 2015)
Belgium National Road Safety Strategy 2011-2020 Recommendations for 15 priority measures for 2015-2020	EU Road Safety Target adopted	50% reduction in fatalities by 2020 compared to 2010; i.e. 420 road deaths in 2020
Cambodia National Plan for Road Safety 2011 -2020 (approved by the Council of Ministers in 2014) 2016 Annual Road Safety Plan (approved by the government)	Based on the UN Global Plan for the Decade of Action for Road Safety Based on UN Sustainable Development Goals	Reduce by 50% the forecasted number of fatalities by 2020 Several sub-targets on helmet wearing rates, speed, drink-driving Interim target for 2016: reduce the number of road deaths by 10% compared to 2015 Interim target for 2017: reduce the number of road deaths by 9% compared to 2016
Canada Road Safety Strategy (RSS) 2025 (introduced in January 2016)	Towards Zero	No hard numerical targets Achieve a continual downward trend in fatalities and serious injuries throughout the ten-year duration of the strategy
Chile New national road safety strategy launched in 2017	Towards Zero Based on the UN Global Plan for the Decade of Action for Road Safety	Specific targets are being developed under the new strategy 50% reduction in fatalities by 2020 compared to 2010
Colombia The National Strategic Road Safety Plan 2011-2021	Based on the UN Global Plan for the Decade of Action for Road Safety	26% reduction in fatalities by 2021 at the national level 18% reduction in fatalities by 2021 among pedestrians 27% reduction in fatalities by 2021 among motorcyclists 21% reduction in injuries caused by traffic accidents by 2021

Country/Strategy/ Timeframe	Vision	Targets
Czech Republic The National Strategic Road Safety Plan 2011-2020	Vision Zero	Reduce the fatality rate to EU 27 average 60% reduction in fatalities by 2020 compared to 2009) 40% reduction in in the number of persons seriously injured by 2020 compared to 2009 Interim targets for the number of fatalities and persons seriously injured are set for each year until 2020
Denmark Danish Road Safety Commission National Traffic Safety Action Plan, 2013-2020	Every accident is one too many - a shared responsibility	53% reduction in fatalities compared to 2010; i.e. fewer than 120 killed in 2020 (based on EU Road Safety target) 52% reduction in both serious and slightly injured road users in 2020 compared to 2010 Plan includes ten focus areas and defines a performance indicator for each area
Finland A resolution on road safety was approved by the government in December 2016, after the end of the 2012-2014 National Road Safety Strategy	Based on Vision Zero	Fewer than 137 fatalities by 2020, equalling 24 fatalities per million inhabitants (based on EU Road Safety target) Fewer than 5 750 injuries by 2020 (based on EU Road Safety target) Long term target: fewer than 100 fatalities by 2025
France Action Plan for Road Safety, including 26 measures announced by Minister of Interior in January 2015 55 measures announced during Inter-Ministerial Road Safety Committee (October 2015) 18 measures announced during the Inter-Ministerial Road Safety Committee (January 2018)	Based on EU Road Safety target	50% reduction in fatalities by 2020 (fewer than 2 000 fatalities)
Germany Road Safety Programme 2011-2020	Based on EU Road Safety target	40% reduction in fatalities by 2020 compared to 2010 Specific targets in individual German states
Greece National Strategic Road Safety Plan 2011 – 2020	Developing a road safety culture	50% reduction in fatalities by 2020 compared to 2010 (based on EU Road Safety target) Interim targets: reduce number of road fatalities by 80 every year between 2010 and 2015 and by 50 fatalities per year between 2016 and 2020.
Hungary Road Safety Action Programme 2014-2016 (integrated into the National Transport Strategy) The new road safety action programme for 2017-2020 is under preparation		50% reduction in fatalities by 2020 compared to 2010 (based on EU Road Safety target) Interim target: fewer than 518 fatalities in 2016
Iceland Road Safety Plan 2011-2022		Rate per 100 000 inhabitants should not be higher than in the best-performing countries by 2022 5% average annual reduction in killed and seriously injured until 2022 11 sub-targets defined
Ireland Government Road Safety Strategy 2013-2020		Reduce fatalities to 25 per million population or less by 2020 (i.e. 124 or fewer fatalities) The Road Safety Administration is currently revising the serious injury target for 2020 Specific targets exist for reducing speed and to increase seat belt use
Israel National Road Safety Plan 2020		30% reduction in fatalities by 2020 compared to 2010; i.e. fewer than 240 fatalities A fatality rate of less than five fatalities per billion kilometres travelled
Italy National Road Safety Plan Horizon 2020	No child should die on the road.	50% reduction of fatalities by 2020 compared to 2010 (based on EU Road Safety target) Mid-term target under consideration: An average annual 7% reduction in the fatality rate, corresponding to a reduction of 38% in 2017 compared to 2010)
Jamaica Below 300 Programme	Make Jamaica the Road Safety Capital of the Caribbean and Latin American Region in accordance with the principles of the Safe Systems Approach	Fewer than 300 fatalities by 2020 Reduce the fatality rate to 10 per 100 000 population by 2022 90% seatbelt usage on both front and back seats and 90% helmet usage by 2021
Japan 10th Traffic Safety Programme 2016-2020	Make Japan the safest country for road traffic	Fewer than 2 500 road fatalities (defined as deaths within 24 hours) by 2020 Fewer than 500 000 casualties by 2020

Country/Strategy/ Timeframe	Vision	Targets
Korea 8th National Transport Safety Plan 2017-2021	Reach the average safety level of OECD countries	Fewer than 2 700 fatalities by 2021 Interim targets for each year from 2017 to 2021 Reducing the rate of fatalities to 5.2 per 100 000 inhabitants by 2021 Less than one fatality per 10 000 vehicles (including mopeds) by 2021
Lithuania Vison Zero declaration for road and railroad transport 2018-2030	No one should be killed or seriously injured on Lithuania's roads and railroads	The main goal of this declaration is to sharply reduce number of road fatalities and serious injuries
Luxembourg National Charter for Road Safety	Zero fatalities and serious injuries on Luxembourg's road network	50% reduction in fatalities by 2020 compared to 2010, representing fewer than 16 fatalities by (based on EU Road Safety target)
Malaysia Road Safety Plan 2014-2020	Based on the UN Global Plan for the Decade of Action for Road Safety	50% reduction in the forecasted number of fatalities by 2020 (corresponds to a 22% reduction compared to 2010)
Mexico National Road Safety Strategy 2011-2020	Based on the UN Global Plan for the Decade of Action for Road Safety	50% reduction in fatalities by 2020
Morocco New National Road Safety Strategy for 2016-2025	Development of responsible road behaviour and a safe road system	Reduce the number of deaths to less than 2 800 by 2020 (decrease of 20% from 2015 to 2020) Reduce the number of deaths to less than 1 900 fatalities by 2025 (decrease of 50% from 2015 to 2025)
Netherlands Road Safety Strategic Plan (SPV) 2008–2020 Development of a new Strategic Plan for the period of 2020-2030 started in 2017	Sustainable Road Safety	28% reduction in fatalities by 2020 compared to 2010, i.e. fewer than 500 43% reduction in serious road injuries (MAIS2+)by 2020 compared to 2010 ; i.e. fewer than 10 600
New Zealand "Safer Journeys": Road Safety Strategy 2010-2020 3rd Action Plan for 2016-2020 New road safety action plan is under development	Safe System A safe road system increasingly free of death and serious injury	No general fatality target Several sub–targets and performance indicators
Nigeria Road Safety Strategy (NRSS 2016-20)	Based on the UN Global Plan for the Decade of Action for Road Safety	50% reduction in fatalities by 2015 compared to 2007 50% reduction in the forecasted number of fatalities by 2020 in comparison with 2010 (based on UN Decade of Action Plan)
Norway National Transport Plan 2018-2029 National Plan of Action for Road Traffic Safety 2018–2021	Vision Zero	Fewer than 350 fatalities and serious injuries by 2029
Poland National Road Safety Programme 2013-2020	Vision Zero	50% reduction in fatalities by 2020 compared to 2010 (based on EU Road Safety target) 40% reduction in severely injured by 2020 compared to 2010
Portugal National Strategic Road Safety Plan (PENSE 2020)		56% reduction in fatalities by 2020 compared to 2010, i.e. 41 fatalities per million inhabitants 22% reduction in seriously injured (MAIS3+) people in 2020 compared to 2010, i.e. fewer than 178
Serbia National Strategy for Road Traffic Safety for the period 2015-2020 (adopted in June 2015)		No child killed in traffic by 2020 50% reduction in fatalities and serious injuries by 2020 compared to 2011 50% reduction in the total annual social-economic costs of traffic crashes by 2020 compared to 2011 Several sub-targets on seatbelt wearing rates, child restraint usage, helmet wearing rates, speed and drink-driving
Slovenia National Road Safety Programme 2013 – 2022	Vision Zero No fatalities and no-one seriously injured on Slovenian roads	50% reduction in fatalities by 2022, i.e. less than 35 fatalities per million inhabitants 50% reduction in seriously injured by 2022, i.e. less than 230 seriously injured per million inhabitants
Spain Road Safety Strategy 2011 – 2020	Safe System/Vision Zero Citizens have the right to a Safe Mobility System in which everyone involved has a responsibility	Less than 3.7 killed per 100 000 population (aligned with the EU Road Safety target fro 2020) 35% reduction in seriously injured compared to 2009 Several targets for various performance indicators (restraint systems, speed, drink-driving, etc.)

	Country/Strategy/ Timeframe	Vision	Targets
	**South Africa** National Road Safety Strategy 2016 - 2030	Aligned with the United Nations Decade of Action pillars	Target under consideration: 50% reduction of fatalities by 2030 compared to 2010
	**Sweden** No safety plan in a traditional sense	Vision Zero (renewed commitment in October 2016)	50% reduction in fatalities between 2007 and 2020 compared to the average for 2006-2008, i.e. not more than 220 deaths per year by 2020 25% reduction in severely injured between 2007 and 2020
	**Switzerland** Via Sicura, adopted in June 2012 by Swiss Federal Council		No hard numerical targets Range of targeted measures
	**United Kingdom (Great Britain)** Road safety statement: "Working together to build a safer road system"	Safe System approach	This British Road Safety Statement sets out the context of road safety in Great Britain today and the overarching scope of road safety activity for the government. It will be followed by consultations on specific issues as options are developed. The statement covers road safety policy within Great Britain as governed by the Department for Transport (DfT). The governments and administrations of Scotland, Wales and Northern Ireland will seek to produce their own policies and strategic documents on devolved matters.
	**United States**	Dedicated to achieving the highest standards of excellence in motor vehicle safety and reducing deaths, injuries and economic losses resulting from motor vehicle crashes.	Performance targets set to end 2019 1.02 fatalities per 100 million vehicle miles travelled in 2019. Performance targets for four sub measures: large trucks, passenger vehicles, non-occupants, and motorcycles

Table 5. **Maximum authorised blood alcohol content** 2018

Country	General Blood Alcohol Content level (g/l)	Differentiated Blood Alcohol Content level (g/l)
Argentina	0.5	0.0 for professional drivers
Australia	0.5	0.0 for novice drivers 0.2 for professional drivers
Austria	0.5	0.1 for moped drivers under 20; novice drivers, drivers of trucks above a weight of 7.5 tonnes and of busses with more than nine seats.
Belgium	0.5	0.2 for professional drivers (since January 2015)
Cambodia	0.5	-
Canada	0.8	Administrative maximum level of 0.5 g/l or 0.4 g/l in most provinces 0.0 g/l administrative maximum level for novice and young (under 21 years of age) drivers in most provinces
Chile	0.3	-
Colombia	0.2	-
Czech Republic	0.0	-
Denmark	0.5	-
Finland	0.5	-
France	0.5	0.2 for bus/coach drivers, novice drivers
Germany	0.5 (Drivers with a BAC between 0.3 and 0.5 g/l can have license suspended if driving ability impaired)	0.0 for drivers under 21 years of age, novice drivers and for professional drivers who transport passengers or hazardous goods
Greece	0.5	0.2 for professional drivers, novice drivers, riders of motorcycles and mopeds
Hungary	0.0	-
Iceland	0.5	-
Ireland	0.5	0.2 for novice and professional drivers
Israel	0.5	0.1 for young drivers under 24 years of age, novice and professional drivers
Italy	0.5	0.0 for young, novice and professional drivers
Jamaica	0.8	-
Japan	0.3	-
Korea	0.5	-
Lithuania	0.4	0.0 for novice and professional drivers; riders of motorcycles and mopeds
Luxembourg	0.5	0.2 for novice and professional drivers
Malaysia	0.8	-
Mexico	0.8 (may vary by state on urban roads)	0.3 for professional drivers (may vary by state)
Morocco	0.2	-
Netherlands	0.5 (including cyclists)	0.2 for novice drivers (first five years)
New Zealand	0.5	0.0 for drivers under 20 years of age
Nigeria	0.5	0.2 for novice and 0.0 g/l for professional drivers
Norway	0.2	-
Poland	0.2	-
Portugal	0.5	0.2 for novice (first three years) and professional drivers (since 1 January 2014)
Serbia	0.2	0.0 for novice and professional drivers and for riders of powered tow-wheelerss
Slovenia	0.5	0.0 for novice (first three years) and professional drivers
South Africa	0.5	0.2 for professional drivers
Spain	0.5	0.3 for novice and professional drivers
Sweden	0.2	-
Switzerland	0.5	0.0 for novice drivers (first three years) and professional drivers
United Kingdom	0.8 (England, Wales, Northern Ireland) 0.5 (Scotland)	-
United States	0.8	0.4 for professional drivers 0.0 to 0.2 for drivers under 21 years of age
Uruguay	0.0	0.0

Table 6. **National speed limits on urban roads, rural roads and motorways**

Country	Urban areas (km/h)	Rural roads (km/h)	Motorways (km/h)
Argentina	40-60 (Buenos Aires City: 20-70)	110	120-130
Australia	50 60-80 (arterial roads - increasing use of 40 km/h or lower limits in urban areas with high pedestrian activities)	100, 110	Set by each state (e.g.130km/h in the Northern Territory, maximum 100 km/h in all other states and territories)
Austria	50	100	130
Belgium	30-50	70-90	120
Cambodia	30-40 (motorcycles, tricycles) 40 (passenger cars, trucks)	60-70 (motorcycles) 90	No motorways
Canada	40-70	80-90	100-110
Chile	60 (maximum default limit but can vary according to the type of road)	100	120 (maximum default speed limit)
Colombia	60	80	120
Costa Rica	50	50-100	No motorways
Czech Republic	50	90	130
Denmark	50	80	130
Finland	50 (sections with 30, 40, or 60)	100 (80 in winter)	120 (100 near cities)
France	50	90 (80 in wet weather and for novice drivers)	130 (110 in wet weather and for novice drivers)
Germany	50	100	None (recommended: 130)
Greece	50	90	130
Hungary	50	90	130 (110 on "motor roads")
Iceland	50	90 (paved roads) 80 (gravel roads)	n.a.
Ireland	60 or less (can be 60 on arterial roads, 30 in built up areas)	80, 100	120
Israel	50-70	80, 90, 100	110, 120
Italy	50	70-90 (110 on some main dual carriageways)	130 (110 in wet weather, 100 for novice drivers. Motorway operator may increase speed limit up to 150 if stringent requirements are met)
Jamaica	50	50	70, 110
Japan	40, 50, 60	50, 60	100
Korea	60	60-80	110 (100 in urban areas)
Lithuania	50	90 (70 on gravel roads and for novice drivers)	120,130 (110 in winter, 90 for novice drivers)
Luxembourg	50	90	130 (110 in wet weather)
Malaysia	50	90	110
Mexico	20-80 (20 in school zones)	60-110 (60 on collector road)	110
Morocco	60	100	120
Netherlands	30-50	60-80	100-130
New Zealand	50 (sections may have higher or lower limits)	100 (specific sections may have lower limits)	100
Nigeria	50 (45 for tankers, trailers)	80 (differentiated by vehicle type)	100 (differentiated by vehicle type)
Norway	50 (30 on residential streets)	80	90,100,110
Poland	50 (60 at night time)	90, 100, 120	140
Portugal	50	90	120
Serbia	50	80, 100	120
Slovenia	50	90 (110 on expressways)	130
South Africa	60	100	120
Spain	50	90,100	120
Sweden	30, 40, 50	60,70,80,90,100	110,120
Switzerland	50	80	120
United Kingdom	48 (30 mph)	96, 113 (60, 70 mph)	113 (70 mph)
United States	Set by each state	Set by each state	88-129 (55-80 mph, set by each state)
Uruguay	45	90	No motorways

Table 7. **Seatbelt wearing rates** 2017 or latest available in front and rear seats of passenger cars

Country	Front seats		Rear seats	
	Date of application	Wearing rate (%)	Date of application	Wearing rate (%)
Argentina	1995	50 drivers	1995	23
Australia	1970s	97 (2016)	1970s	95 (2016)
Austria	1984	97 drivers, 98 passengers	1990	93
Belgium	1975	92 drivers and passengers (2015)	1991	86 (2015)
Cambodia	2007	28 (2016)	Law in preparation	--
Canada	1976-1988	97.5	1976-1988	95 (2015)
Chile	1985	75 drivers, 64 passengers	2006	17
Colombia	1970	n.a.	1970	n.a.
Czech Republic	1966	95 (2015)	1975	95 (2015)
Denmark	1970s	96 (2014)	1980s	91 (2016)
Finland	1975	96 drivers and passengers (2016)	1987	85 (2016)
France	1973 (rural), 1975 (urban) 1979 (all times)	99.2 on rural roads 97.9 in major urban areas (2016)	1991	87 major urban areas 89 motorways (2016)
Germany	1976	98 drivers, 99 passengers	1984	97
Greece	1987	77 drivers, 74 passengers (2009)	2003	23 (2009)
Hungary	1976	90.4 drivers, 89 passengers	1993 outside built up areas, 2001 in built up areas	52
Iceland		79 on urban roads, 92 on rural roads		80
Ireland	1971	96 drivers, 96 passengers	1971	83
Israel	1975	90	1995	70
Italy	1988	63 (2015/16)	1994	11 (2015/16)
Jamaica	1999	Very low	1999	Very low
Japan	1985	99 drivers, 95 passengers	2008	36
Korea	1990	94 drivers on motorways, 83 passengers on motorways	2008 (on motorways only)	30 on motorways
Lithuania	--	98	--	26
Luxembourg	1975	90 (2015)	1992	76 (2015)
Malaysia	1978	87 drivers, 74 passengers (2016)	2009	15 (2016)
Mexico	2016	49	2016	61
Morocco	1977 for rural areas 2005 for urban areas	71 drivers on motorways 62-65 drivers' urban/rural roads 59-62 pass. on urban/rural roads	2005 for rural areas	25
Netherlands	1975	>95 (2010)	1992	82 (2010)
New Zealand	1972	97 drivers, 96 passengers (2016)	1979	92 (2014)
Nigeria	1997 (enforced since 2002)	85	1997 (enforced since 2016)	3
Norway	1975	97 drivers	1985	--
Poland	1983	93 drivers, 95 passengers (2016)	1991	83 (2016)
Portugal	1978	96 drivers and passengers	1994	77
Serbia	1982	76 all, 78 drivers, 72 passengers	2009	12
Slovenia	1977	90 drivers, 92 passengers	1998	69 adults (2016)
South Africa	2005 (vehicles registered after 1 January 2006)	4.5 drivers, 5 passengers (estimation 2010 data)	2005 (for vehicles registered after 1 January 2006)	--
Spain	1974 outside urban areas 1992 inside urban areas	90 (2012)	1992	81 (2012)
Sweden	1975	98	1986; child restraint since 1988	94 children, 90 adults (2016)
Switzerland	1981	95 drivers, 93 passengers	1994	84
United Kingdom	1983	98 drivers, 97 passengers (2014 data for England and Scotland)	1989 (children); 1991 (adults)	91 (2014 data for England and Scotland)
United States	Primary law in 34 states, secondary law in 15 states. Not mandatory for adults in one state.	90.2 drivers, 87.9 passengers	Varies by State	80.6 (2016)
Uruguay	2007	69 drivers (2016)	2007	33 (2016)

Table 8. Helmet laws and wearing rates 2017 or latest available year

Country	Powered two-wheelers		Cyclists	
	Helmet law	Wearing rate (%)	Helmet law	Wearing rate (%)
Argentina	Yes	65 drivers, 44 first pass., 22 additional passengers	No	
Australia	Yes	99 drivers (estimate)	Yes	
Austria	Yes	100 (approx.)	Yes, for children to age 12	
Belgium	Yes	No national data 99.3 Brussels (2013 data)	No	
Cambodia	Yes, motorcycles from 50 cc, motorcycles with trailers, motorised tricycles (drivers and passengers)	Low (no precise data)	No	
Canada	Yes		In some jurisdictions	
Chile	Yes	99 drivers, 100 passengers (2017 data)	Yes in urban areas.	
Colombia	Yes	n.a.	No	n.a.
Czech Republic	Yes	100 (approx.)	Yes, for children to age 18	
Denmark	Yes	90 mopeds, 98 motorcycles (2016 data)	Yes	35 (2016 data)
Finland	Yes	n.a	No	42 (2016 data) 64 Helsinki area (2016 data)
France	Yes, since 1973	98 weekdays, 99 weekends (2016 data)	Yes, for children to age 12	17 weekdays, 28 weekends (2016 data-indicative values)
Germany	Yes	99 drivers, 100 passengers (inside urban areas, 2017 data)	No	19 (inside urban areas, 2017 data)
Greece	Yes	75 drivers, 46 passengers (2009 data)	No	
Hungary	Yes since 1965 for motorcyclists, 1997 for moped riders outside built up areas 1998 for moped riders in urban areas.	100 (approx.)	No	23 Budapest area 4 Rural areas (2017 data)
Iceland	Yes	n.a	Yes, for children to age 14	
Ireland	Yes	100 (approx.)	No	38
Israel	Yes	100 (approx.)	Yes, for children to age 18, for adults on rural roads	90 rural roads (2013 data)
Italy	Yes, for all since 2000	98 (2015-2016)	No	
Jamaica	Yes, since 1999	Very low	No	Very low
Japan	Yes	100 (approx.)	No	
Korea	Yes	84	No	
Lithuania	Yes		Yes, for children to age 18	
Luxembourg	Yes, since 1976	100 (estimate)		
Malaysia	Yes, since 1973	c. 77(2015)	No	
Mexico	Yes	83 drivers, 55 passengers (2016 data)	Yes	
Morocco	Yes, since 1976	65 drivers, 34 passengers	No	
Netherlands	Yes, motorcycles since 1972; mopeds since 1975. Not compulsory on mofas (max. 25 km/h)	100 motorcyclists (approx.), 96 moped riders (2008)	No	
New Zealand	Yes, since 1956 when travelling above 30 mph Since 1973 at all speeds	100 (approx.)	Yes, since 1994	92 (2012 data)
Nigeria	Yes	20 (estimate)	Yes	Not available

Norway	Yes	100 (approx.)	No	59 (all age groups) 57 (above 12) 79 (below 12)
Poland	Yes since 1997	100 (approx.)	No	
Portugal	Yes	n.a	No	
Serbia	Yes	89 motorcyclists 70 moped riders	No	
Slovenia	Yes	n.a	Yes for children to age 14	
South Africa	Yes		Yes	
Spain	Yes	100 (approx.)	Except in built-up areas. Mandatory below age 16	
Sweden	Yes	96-99 98 mopeds (2017 data)	Yes, for children to age 15	67-85 children (2017) 37-40 adults (2017)
Switzerland	Yes, motorcycles since 1981; mopeds since 1990	100 (approx.)	No for regular bicycles Yes for e-bikes > 25km/h	46 cyclists 66 e-bikes <25km/h: 83 e-bikes >25km/h:
United Kingdom	Yes, motorcycles 1973; mopeds since 1977		No	
United States	No national law.19 states require helmet use by all, 28 by some users, 3 have no helmet law.	65 use of DOT-compliant helmets (2016 data)	Age-specific helmet laws in 21 states and D.C.	
Uruguay	Yes	92.6 drivers, 81.8 passengers (2016 data)	Yes	

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