Formational Transport Forum



Road Safety Annual Report 2014

Summary







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IRTAD: An International Expert Network and Database on Road Safety Data

The International Traffic Safety Data and Analysis Group (IRTAD) is a permanent working group of the Joint Transport Research Centre of the OECD and the International Transport Forum. It is composed of road safety experts and statisticians from renowned safety research institutes, national road and transport administrations, international organisations, universities, automobile associations, the automobile industry, and others from OECD and non-OECD countries.

Its main objectives are to contribute to international co-operation on safety data and its analysis. Its key outputs are the IRTAD database that currently publishes safety data from 32 countries and its annual report on road safety performance. It also conducts regular research and analysis on topics related to safety data analysis (e.g. forecasting, relationship between speed and crash risks, road safety and economic developments).

Currently, more than 70 organisations from 39 countries are members of IRTAD - representing a wide range of public and private bodies with a direct interest in road safety (see list of members at the end of the report).

The ambition of IRTAD is to include new countries and to build and maintain a high-quality database on road safety information. IRTAD offers a mechanism for the integration of prospective member countries while assisting with improvement of road safety data collection systems, where needed. The IRTAD Group co-operate with the World Bank's Global Road Safety Facility and the Interamerican Development Bank to involve low- and middle-income countries in the work of the Group.

The most visible product of the IRTAD Group is the International Road Traffic and Accident Database. The database includes aggregated data on injury accidents, road fatalities, injured and hospitalised road users, as well as relevant exposure data, in relation to factors such as population, motor vehicle fleet, road network length, vehicle-kilometres and seatbelt wearing rates from 31 countries, covering every year since 1970. Key road safety indicators are compiled on a monthly basis. Data on serious injuries based on MAIS3+ definitions are being progressively included.

In 2013, IRTAD launched the IRTAD LAC database, to support the work of the Ibero American Road Safety Observatory (OISEVI).

INTERNATIONAL TRANSPORT FORUM

The International Transport Forum at the OECD is an intergovernmental organisation with 54 member countries. It acts as a strategic think tank with the objective of helping shape the transport policy agenda on a global level and ensuring that it contributes to economic growth, environmental protection, social inclusion and the preservation of human life and well-being. The International Transport Forum organises an Annual Summit of ministers along with leading representatives from industry, civil society and academia.

The International Transport Forum was created under a Declaration issued by the Council of Ministers of the ECMT (European Conference of Ministers of Transport) at its Ministerial Session in May 2006 under the legal authority of the Protocol of the ECMT, signed in Brussels on 17 October 1953, and legal instruments of the OECD.

The Members of the Forum are: Albania, Armenia, Australia, Australia, Azerbaijan, Belarus, Belgium, Bosnia-Herzegovina, Bulgaria, Canada, Chile, China, Croatia, the Czech Republic, Denmark, Estonia, Finland, France, FYROM, Georgia, Germany, Greece, Hungary, Iceland, India, Ireland, Italy, Japan, Korea, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Mexico, Moldova, Montenegro, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, the United Kingdom and the United States.

The International Transport Forum's Research Centre gathers statistics and conducts co-operative research programmes addressing all modes of transport. Its findings are widely disseminated and support policy making in Member countries as well as contributing to the annual summit.

Further information about the International Transport Forum is available at www.internationaltransportforum.org

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Key Messages

- The road fatality count in IRTAD countries was 1.7% lower in 2012 than 2011 whilst mobility, in terms of motorised vehicle-kilometres, remained more or less constant. For ten IRTAD countries the number of fatalities increased in 2012.
- Although the fatality reduction fits into the long-term downward trend, 2012 saw the smallest reduction in ten years. Such a modest rate of improvement is insufficient to meet the UN road safety target. The objective of the UN Decade of Action for Road Safety 2011–2020 is to reduce the projected number of road fatalities worldwide (1.9 million in 2020 on past trends) by 50%.
- Five European countries managed to reduce their annual road fatalities per 100 000 population (mortality rate) to three or less, namely Denmark, Norway, Sweden, the United Kingdom and Iceland.
- The recent favourable developments in the safest IRTAD countries demonstrate the way forward for other countries, exemplifying that progress in road safety is always possible, even for the best performers.
- Preliminary trends for 2013, based on provisional fatality data, show an equally dispersed picture: ten of the countries saw an increase in fatalities, some in excess of 10%; 22 countries managed to reduce their road death toll, nine of them by more than 10% – Austria, the Czech Republic, France, Greece, Lithuania, the Netherlands, New Zealand, Portugal and Switzerland.
- Between 2000 and 2012, the annual death toll in IRTAD countries fell by nearly 40%, i.e. a reduction of more than 45 000 road deaths a year when compared to the level in 2000. This period saw robust road safety strategies with well-defined and targeted measures (such as in the areas of speed management, alcohol and seat-belt use) introduced in many countries for the first time.
- There was, however, limited success in saving lives among vulnerable road users. Reductions in deaths of pedestrians, cyclists and motorcyclists have levelled-off and some increases have been recorded since 2009/10.
- Pedestrians are the largest group of vulnerable road users in most countries and alone account for around 19% of all fatalities in IRTAD countries, following a slightly increasing trend. Close to 40% of all pedestrians killed belong to the age group 65+. The ITF report, "Pedestrian Safety, Urban Space and Health", sets out strategies to improve pedestrian safety and to promote walking as a healthy alternative and complement to motorised transport.
- The share of fatalities among elderly road users is slowly increasing in many IRTAD countries, reflecting the changing age structure of populations. In 2012, for European IRTAD members, the share of fatalities in the age group 65+ was for the first time in excess of 30%. In Japan, this share is traditionally even higher, at around 55%.
- Cycling is an increasingly popular alternative transport mode for short trips. The increased number of cyclists has been accompanied by a slowing of the rate of improvement, or even an increase in cycling fatalities over the past decade. The ITF report, "Cycling, Health and Safety", explores options to improve cycling safety and presents a range of good-practice examples.

- Males account for the largest share of fatalities across all modes (including pedestrians), with the lowest shares in Japan (around 65% of all fatalities) and the highest in Europe (more than 75% in 2012).
- Inappropriate behaviour of road users, such as excessive and inappropriate speed, driving under the influence of alcohol and/or drugs and the non-use of safety equipment such as seat belts and crash helmets, remain important contributory factors in fatal crashes and for injuries.
- The use of seat belts continues to differ widely between IRTAD countries, between 39% and 98% on front seats, and between 3% and 97% on rear seats.
- The costs to society of road crashes are substantial and constitute a major burden for economies. Although no common international approach to assess crash costs has been agreed, estimations range from 1 to 3% of GDP, depending on the methodology used, but could grow significantly as research on the consequences of the most severe injuries improves.
- In the quest to reduce serious injuries, IRTAD is encouraging governments to establish systems for the combined analysis of police and hospital data, in order to get a fuller picture of the true extent of the problem. The IRTAD database will be enlarged progressively to host additional information on the estimates of serious injuries (with a Maximum Abbreviated Injury Score – MAIS -- of 3 and more).

Summary of Road Safety Performance in 2012 and 2013

In 2012 success in reducing road fatalities in the IRTAD member countries was relatively modest, while mobility (in terms of vehicle-kilometres) hardly changed (increase by 0.6% from 20111). At only minus 1.7%2, IRTAD saw the lowest fatality reduction rate in ten years; the more than 79 000 total fatalities of 2011 were reduced by around 1 300, and ten countries faced an increase in 2012, among them New Zealand (+8.5%), Switzerland (+5.9%) and the United States (+3.3%) (see Table 1).

Preliminary trends for 2013, based on provisional fatality data in IRTAD Member and observer countries, show an equally dispersed picture: ten of the countries saw an increase in fatalities, in excess of 10% in some cases. 22 countries managed to reduce their road death toll; some by more than 10%, including Austria, the Czech Republic, France, Greece, Lithuania, New Zealand, the Netherlands, Portugal and Switzerland (see Table 2).

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Argentina					+10.9%	+13.8%	+8.7%	+6.1%	-9.4%	-2.4%	-1.1%	+1.3%
Australia	-4.4%	-1.3%	-5.5%	-2.3%	+2.8%	-1.5%	+0.1%	-10.4%	+3.5%	-9.1%	-5.6%	+1.7%
Austria	-1.8%	-0.2%	-2.6%	-5.7%	-12.5%	-4.9%	-5.3%	-1.7%	-6.8%	-12.8%	-5.3%	+1.5%
Belgium	+1.1%	-9.0%	-10.3%	-4.2%	-6.3%	-1.8%	+0.2%	-11.9%	-0.1%	-10.9%	+2.5%	-10.9%
Cambodia									+4.8%	+5.8%	+4.9%	+3.2%
Canada*	-5.1%	+6.0%	-4.9%	-1.7%	+6.1%	-0.5%	-4.3%	-11.8%	-8.7%	+0.6%	-10.3%	+4.9%
Czech Republic	-10.2%	+7.3%	+1.1%	-4.5%	-6.9%	-17.3%	+15.0%	-11.9%	-16.3%	-11.0%	-3.6%	-4.0%
Denmark	-13.5%	+7.4%	-6.7%	-14.6%	-10.3%	-7.6%	+32.7%	+0.0%	-25.4%	-15.8%	-13.7%	-24.1%
Finland	+9.3%	-4.2%	-8.7%	-1.1%	+1.1%	-11.3%	+13.1%	-9.5%	-18.9%	-2.5%	+7.4%	-12.7%
France	+1.0%	-6.2%	-20.9%	-7.7%	-4.9%	-11.5%	-2.0%	-7.4%	-0.0%	-6.6%	-0.7%	-7.8%
Germany	-7.0%	-1.9%	-3.3%	-11.7%	-8.2%	-5.0%	-2.8%	-9.5%	-7.3%	-12.1%	+9.9%	-10.2%
Greece	-7.7%	-13.1%	-1.8%	+4.0%	-0.7%	-0.1%	-2.7%	-3.7%	-6.2%	-13.6%	-9.3%	-13.8%
Hungary	+3.3%	+15.3%	-7.2%	-2.3%	-1.4%	+2.0%	-5.4%	-19.2%	-17.3%	-10.2%	-13.8%	-5.2%
Ireland	-1.0%	-8.5%	-10.9%	+11.6%	+5.9%	-7.8%	-7.4%	-17.5%	-14.7%	-10.9%	-12.3%	-12.9%
Israel	+17.5%	-3.0%	-13.6%	+4.9%	-6.4%	-7.3%	-5.7%	+7.9%	-23.8%	+12.1%	-3.1%	-22.9%
Italy	+0.5%	-1.6%	-6.0%	-6.7%	-5.0%	-2.6%	-9.5%	-7.9%	-10.3%	-2.9%	-6.2%	-5.4%
Japan	-3.3%	-4.2%	-7.3%	-4.3%	-6.7%	-8.3%	-8.8%	-9.2%	-3.9%	-0.4%	-5.1%	-4.9%
Korea	-20.9%	-10.8%	-0.1%	-9.0%	-2.8%	-0.8%	-2.5%	-4.8%	-0.5%	-5.7%	-5.0%	+3.1%
Netherlands	-8.2%	-0.6%	+4.2%	-21.8%	-6.7%	-2.7%	-2.9%	-4.5%	-4.9%	-16.6%	+1.7%	+2.9%
New Zealand	-1.5%	-11.2%	+14.1%	-5.4%	-7.1%	-3.0%	+7.1%	-13.3%	+5.2%	-2.3%	-24.3%	+8.5%
Norway	-19.4%	+13.5%	-9.6%	-8.5%	-13.6%	+8.5%	-3.7%	+9.4%	-16.9%	-1.9%	-19.2%	-13.7%
Poland	-12.1%	+5.3%	-3.2%	+1.3%	-4.7%	-3.7%	+6.5%	-2.6%	-15.9%	-14.5%	+7.2%	-14.8%
Portugal	-10.0%	+0.2%	-7.7%	-16.3%	-3.6%	-22.3%	+0.5%	-9.1%	-5.0%	+0.9%	-4.9%	-19.4%
Slovenia	-11.5%	-3.2%	-10.0%	+13.2%	-5.8%	+1.9%	+11.4%	-27.0%	-20.1%	-19.3%	+2.2%	-7.8%
Spain	-4.5%	-3.1%	+1.0%	-12.2%	-6.3%	-7.6%	-6.8%	-18.9%	-12.5%	-8.7%	-16.9%	-7.6%
Sweden	-6.3%	-4.0%	-0.6%	-9.3%	-8.3%	+1.1%	+5.8%	-15.7%	-9.8%	-25.7%	+19.9%	-10.7%
Switzerland	-8.1%	-5.7%	+6.4%	-6.6%	-19.8%	-9.5%	+3.8%	-7.0%	-2.2%	-6.3%	-2.1%	+5.9%
United Kingdom	+0.5%	-0.5%	+2.2%	-7.9%	-1.0%	-1.1%	-7.2%	-13.5%	-11.6%	-18.5%	+2.9%	-8.1%
United States*	+0.6%	+1.9%	-0.3%	-0.1%	+1.6%	-1.8%	-3.4%	-9.3%	-9.5%	-2.6%	-1.6%	+3.3%

Table 1. **Annual evolution in the number of road fatalities** (Iceland and Luxembourg omitted for small figures)

Source: IRTAD. *provisional data for 2012

¹ For the 19 countries which provided mobility data for the given years.

² For the 31 countries listed in Table 1, it does not include data from new member and observer countries for which data are currently under review. For a full list of IRTAD countries, including observers, see Table 3 for reference.

Country	Trend	Period	Country	Trend	Period
Argentina	+	Provisional annual fatality data	Italy		Provisional data for motorways and state roads show a decrease in the number of fatalities.
Australia*	**	Provisional annual fatality data	Japan		Final annual fatality data
Austria*	***	Final annual fatality data	Korea*	**	Final annual fatality data
Belgium	**	Provisional annual fatality data	Lithuania*	XXX	Final annual fatality data
Cambodia		Final annual fatality data	Luxembourg	***	Final annual fatality data
Canada			Malaysia	+	Provisional annual fatality data
Chile*	**	Provisional annual fatality data	Netherlands* (real data see country rep.)	XXX	Final annual fatality data
Colombia	×	Provisional annual fatality data	New Zealand*	XXX	Final annual fatality data
Czech Republic*	XXX	Provisional annual fatality data	Nigeria*	**	Provisional annual fatality data
Denmark	***	Provisional annual fatality data	Norway*	***	Provisional annual fatality data
Finland	×	Provisional annual fatality data	Poland*	**	Final annual fatality data
France*	XXX	Provisional annual fatality data	Portugal*	XXX	Provisional fatality data January to September
Germany*	XX	Provisional annual fatality data	Serbia		Final annual fatality data
Great Britain		Provisional fatality data 12months gliding to September	Slovenia		Final annual fatality data
Greece*	***	Provisional annual fatality data	Spain*		Provisional annual fatality data
Hungary		Final annual fatality data	Sweden		Final annual fatality data
Iceland	***	Provisional annual fatality data	Switzerland*		Final annual fatality data
Ireland*	***	Final annual fatality data	United States*		Provisional fatality data 12months gliding to September
Israel	×	Final annual fatality data			

Table 2.	Preliminary trends	for 2013,	based on	provisional	fatality data
	(compared to	the same	period in 2	2012)	

Source: IRTAD.

-1% < change < 1%	+
Decrease 1-5%	~
Decrease 5-10%	
Decrease > 10%	XXX

Increase 1-5% Increase 5-10% Increase > 10%



* Change significant at the 5% level.

Road Fatalities										
	R	ecent dat	a		Long-term trends	n Average annual change ¹				
Country	2012	2011	2010	Change 2012-2011	Change 2012-2000	2010- 2001	2000- 1991	1990- 1981	1980- 1971	
Argentina	5 104	5 040	5 094	1.3%	-	-	-	-	-	
Australia	1 299	1 277	1 353	1.7%	-28.5%	-2.7%	-1.7%	-3.9%	-1.0%	
Austria	531	523	552	1.5%	-45.6%	-5.9%	-5.0%	-2.5%	-3.9%	
Belgium	767	861	840	-10.9%	-47.8%	-6.1%	-2.7%	-1.3%	-2.8%	
Cambodia	1 966	1 905	1 816	3.2%	-	-	-	-	-	
Canada	2 104 ^p	2 006	2 237	4.9%	-27.5%	-2.3%	-2.6%	-3.3%	-0.2%	
Chile ^a	1 980	2 045	2 074	-3.2%	-10.3%	0.2%	-	-	-	
Colombia ^{a*}	5 922	5 528	5 502	7.1%	-9.6%	-1.6%	-	-	-	
Czech Republic	742	773	802	-4.0%	-50.1%	-5.5%	1.2%	0.8%	-4.9%	
Denmark	167	220	255	-24.1%	-66.5%	-5.7%	-2.2%	-0.5%	-6.1%	
Finland	255	292	272	-12.7%	-35.6%	-5.0%	-5.1%	1.8%	-7.8%	
France	3 653	3 963	3 992	-7.8%	-55.3%	-7.8%	-2.5%	-2.1%	-2.8%	
Germany	3 600	4 009	3 648	-10.2%	-52.0%	-7.0%	-4.4%	-	-	
Greece	984	1 141	1 258	-13.8%	-51.7%	-4.4%	-0.4%	2.8%	3.0%	
Hungary	605	638	740	-5.2%	-49.6%	-5.6%	-6.1%	4.7%	-1.3%	
Iceland	9	12	8	-25.0%	-71.9%	-11.5%	1.9%	0.0%	2.0%	
Ireland	162	186	212	-12.9%	-61.0%	-7.1%	-0.8%	-2.0%	-0.2%	
Israel	263	341	352	-22.9%	-41.8%	-4.5%	0.4%	-0.2%	-4.0%	
Italy	3 653	3 860	4 114	-5.4%	-48.3%	-5.9%	-1.5%	-2.2%	-1.9%	
Jamaicaª	260 ^p	307	319	-15.3%	-22.2%	-1.4%	-3.1%	-	-	
Japan	5 237	5 507	5 806	-4.9%	-49.7%	-5.9%	-3.6%	2.8%	-6.7%	
Korea	5 392	5 229	5 505	3.1%	-47.3%	-4.2%	-4.5%	8.7%	5.6%	
Lithuania ^b	301	296	300	1.7%	-53.0%	-9.1%	-6.5%	2.6%	-	
Luxembourg	34	33	32	3.0%	-55.3%	-8.3%	-1.0%	-3.7%	1.5%	
Malaysia ^b	6 917	6 877	6 872	0.6%	14.6%	1.8%	-	-	-	
Netherlands	650	661	640	-1.7%	-44.3%	-5.7%	-1.0%	-3.0%	-5.0%	
New Zealand	308	284	375	8.5%	-33.3%	-2.1%	-3.7%	1.0%	-1.4%	
Nigeria ^c	6 092	6 054	6 052	0.6%	-28.1%	-	-	-	-	
Norway	145	168	208	-13.7%	-57.5%	-3.1%	0.6%	-0.2%	-4.2%	
Poland	3 571	4 189	3 908	-14.8%	-43.3%	-3.8%	-2.5%	2.1%	-	
Portugal	718	891	937	-19.4%	-65.0%	-7.3%	-4.5%	0.3%	3.5%	
Serbia ^c	688	731	660	-5.9%	-34.4%	-7.1%	-6.4%	0.9%	-	
Slovenia	130	141	138	-7.8%	-58.6%	-7.5%	-4.2%	-1.0%	-1.6%	
Spain	1 903	2 060	2 478	-7.6%	-67.1%	-8.5%	-4.6%	3.9%	1.9%	
Sweden	285	319	266	-10.7%	-51.8%	-7.8%	-2.5%	-0.2%	-3.9%	
Switzerland	339	320	327	5.9%	-42.7%	-5.5%	-3.7%	-2.2%	-3.8%	
United Kingdom	1 802	1 960	1 905	-8.1%	-49.7%	-6.8%	-3.1%	-1.3%	-2.8%	
United States	33 561 ^p	32 479	32 999	3.3%	-20.0%	-2.7%	0.1%	-1.1%	-0.3%	

Table 3. Road safety trends

Source: IRTAD

Police-recorded fatalities (except the Netherlands for 2000 onwards: real data, see country report). Death within 30 days. For recent methodology changes in calculation of the fatality data in Austria, Spain and Portugal, see country reports. a=IRTAD LAC b=accession country. Data are under review. c=observer. Data not reviewed by IRTAD. p=provisional data for 2012. *Information provided by CFPV not validated by the Government of Colombia.

 $\label{eq:generative} ^{1}Geometric mean: 1-(\Sigma Fatalities_{EndYear}/\Sigma Fatalities_{StartYear})^{1/n} \ n... Number of years (n=9 for period 2001 to 2010)$

Five countries now at 3 or less fatalities per 100 000 population

2012 nevertheless saw some significant successes: a record number of countries managed to reduce the number of road fatalities per 100 000 population to three or less, namely Iceland, United Kingdom, Norway, Denmark and Sweden (see Figure 1). These countries may serve as role models for other countries, showing that further progress in road safety is always possible, even for the best performers.



Figure 1. Road fatalities per 100 000 population in 2012 in IRTAD member and observer countries

Source: IRTAD.

Success since 2000

Success in improving safety levels over the decade since 2000 continues to be unequally spread, both across countries and across transport modes. The highest fatality reductions since 2000 were achieved in Spain (-67.1%), Denmark (-66.5%) and Portugal (-65.0%), whereas least success was recorded for the United States (-20.0%) and Australia (-28.5%)3 as well as in a number of observer countries (see figure 9).

³ Iceland not listed here because of small numbers.

Share of elderly road user fatalities increasing

The share of fatalities among elderly road users is on a slow increase in many IRTAD countries, reflecting the changing age structure of populations and a trend to stay mobile for longer. In 2012, for European IRTAD members the share of fatalities in the age group 65+ was, for the first time, in excess of 30%. In Japan, this share is traditionally much higher, now around 55%. The share of the elderly among the population varies substantially at 14% in the United States, Canada and Australia, 18% for Europe and 23% for Japan, indicating that the chance of surviving a road crash is significantly reduced for elderly road users. In many IRTAD regions the elderly population has continuously grown since 2000 – by more than 10% in the United States, Canada, Europe and Japan.





The majority of fatalities are male

Males account for the largest share of fatalities across all modes (including pedestrians), with the lowest shares in Japan (around 65% of all fatalities) and the highest in Europe (more than 75% in 2012). Except for Japan, slight increases in the share of male fatalities are noted in several OECD regions since 2000, such as North America and Europe (seeFigure 3). The percentage of males in the general population in the regions observed ranges from 48.7% in Japan to 49.8% in Australia, with no obvious trend in the observation period.



Figure 3. Share of male road fatalities in selected IRTAD countries/regions (% of all fatalities)

Only moderate safety improvements for vulnerable road users

Since the year 2000, there has been, however, less success in saving lives among vulnerable road users than amongst car occupants: reduction in deaths among pedestrians, cyclists and motorcyclists have levelled-off and some increases have been recorded since 2009-10. Fatalities among car occupants were reduced by 50% between 2000 and 2012, whereas decreases were only 34% for pedestrians, 31% for cyclists and 17% for motorcyclists – the latter after an initial increase until 2007.



Figure 4. Development of fatalities in IRTAD countries by road user type (2000 = 1)

Pedestrian safety

Pedestrians are the largest group of vulnerable road users in most countries and account for around 19% of all fatalities in IRTAD countries. Close to 40% of all pedestrians killed belong to the age group 65+; this share has constantly increased from less than 34% in 2000, indicating the changing safety requirements of an ageing society which will have to be met by our transport system. The highest shares of pedestrian fatalities were recorded in Korea, Japan, Poland and Israel (see Figure 5). Pedestrian safety continues to be one of the major road safety issues around the world, especially in lower income countries.



Source: IRTAD.

4

As the comparatively poor improvements in pedestrian safety have become a concern at OECD level, the Joint Transport Research Centre of OECD and the International Transport Forum (JTRC) convened an international expert group and published a report entitled "Pedestrian Safety, Urban Space and Health in 2012"4. The report sets out strategies to provide a safe walking infrastructure - both from the urban stages of urban development projects and in on-going transport investment – and to promote walking as a healthy alternative and complement to motorised transport.

http://internationaltransportforum.org/jtrc/safety/PUSH/index.html

The 9 key messages of the JTRC Research Report "Pedestrian Safety, Urban Space and Health in 2012"

Walking is the most fundamental form of mobility. It is inexpensive, emission-free, uses human power rather than fossil fuel, offers important health benefits, is equally accessible for all – except those with substantially impaired mobility – regardless of income, and for many citizens is a source of great pleasure. Yet walking presents challenges to society's least robust individuals.

The vitality of a city is closely linked to people being out and about on foot for many purposes. Beyond walking for access to goods and services, these other activities in the urban space are collectively termed "sojourning". Walking and sojourning are at the heart of urban life and contribute to liveable, attractive, prosperous and sustainable cities.

Walking is, however, the neglected transport mode and, despite being at the start and end of all trips, is rarely captured in government statistics on mobility and is often neglected in planning and policy development.

Public institutions representing specifically the interests of pedestrians – including the socially disadvantaged members of society who rely heavily on walking – are rare.

Walking and public transport are interdependent elements of sustainable urban mobility. Walking is facilitated by a well-connected network with pedestrian-friendly infrastructure and well-designed urban space.

Pedestrians are among the road users most vulnerable to traffic injury. It has become highly challenging, especially for older and young people, to cope with the complex, sometimes hostile, traffic conditions that characterise today's cities and towns.

Pedestrians suffer severe trauma from falls in public spaces and in traffic collisions while crossing streets. The magnitude of the consequences of falls is known to be underestimated. Older people have an elevated risk of severe injury and death from both falls and traffic collisions.

Lowering motorised traffic speeds reduces the frequency and severity of crashes, especially those involving pedestrians. Reducing speed also contributes to smoother traffic flow, and enhances in many ways the liveability and sustainability of cities.

Motorisation has contributed to urban sprawl, and cities have evolved to accommodate car use, with many negative impacts on life and social cohesion. Changes are required now to manage the preponderant role of motorised traffic in industrialised countries. This is also urgent in low- and middle-income countries, which are now moving rapidly towards much higher levels of motorisation.

Cycling safety

Cycling is an increasingly popular transport mode for short trips – for economic and ecological reasons, and – not least – as a means to improve health. The increasing number of cyclists has coincided with a tailing-off of cycling safety improvement over the past decade. Cyclists currently represent around 5% of all fatalities in IRTAD countries, with an increasing trend since 2010. This prompted the JTRC to convene an international expert group. Their research report, "Cycling, Health and Safety", was published in 2013⁵. The report monitors international trends in cycling, safety and policy, and explores options that may help decision-makers design safe environments for cycling. The safety impacts of a presented.

The 11 key recommendations of the JTRC Research Report "Cycling, Health and Safety"

- 1. Where it does not reduce the quality of cycling networks, bicycle facilities should be located away from road traffic when feasible especially for sections where cars are accelerating (hills, long straightaways).
- Insufficient evidence supports causality for the "safety in numbers" phenomenon policies increasing the number of cyclists should be accompanied by risk-reduction actions.
- 3. Efforts must be made to harmonise definitions of bicycle accident terminology so as to be able to make reliable international comparisons on cyclist safety.
- 4. National authorities should set standards for, collect or otherwise facilitate the collection of data on non-fatal cycling crashes based on police reports and, in either a systematic or periodic way, on hospital records.
- 5. National authorities should set standards for, collect or otherwise facilitate the collection of accurate, frequent and comparable data on bicycle usage.
- 6. Speed management acts as "hidden infrastructure" protecting cyclists and should be included as an integral part of cycle safety strategies.
- 7. Cyclists should not be the only target of cycling safety policies motorists are at least as important to target.
- 8. Cycle safety policies should pay close attention to intersection design visibility, predictability and speed reduction should be incorporated as key design principles.
- Authorities seeking to improve cyclists' safety should adopt the Safe System approach policy should focus on improving the inherent safety of the traffic system, not simply securing cyclists in an inherently unsafe system.
- 10. Authorities should match investments in cycle safety to local contexts, including levels of bicycle usage and account for cyclist heterogeneity.
- 11. Cycle safety plans should address safety improvement and the improvement of perceived safety.

^{5.} http://internationaltransportforum.org/jtrc/safety/cycling.html

Use of safety equipment: Seat-belt use

The use of seat belts is regarded as one of the most efficient measures to save lives and reduce crash injury severity for car occupants. Despite the fact that most IRTAD countries have mandatory seat-belt regulations in place, use rates vary widely both between countries and between front and rear seats. For front seats, values typically range between 80% and 100% whereas for rear seats the range is between 3% (Serbia) and over 90% (Germany, Australia) (see Figure 6).





Source: IRTAD.

Examples of road safety policy activities in IRTAD countries

The IRTAD Group is not only a platform for collection and analysis of key crash and fatality data but also a forum for exchange of good practices in terms of policy developments, road safety strategies and successful interventions. Therefore, a regular survey is carried out annually among members, regarding progress among all dimensions of road safety management. Detailed information on particular member states can be found in the Country Reports of the IRTAD annual report.

A number of new policy initiatives were implemented. In Europe, for example, alcohol ignition interlocks have entered into legislation in Sweden and Finland; Belgium and Austria have introduced regulations for streets where cyclists have priority; the Netherlands are testing self-reporting of road accidents in a pilot study; France is increasing the use of red light cameras as well as mobile speed cameras. From Malaysia, a set of promising safety initiatives was reported, among them an automated enforcement programme and a customer response-based safety performance check of bus operators. In Canada and the United States, a Fatigue Management Programme for professional drivers was launched.

Figure 7 presents an overview on policy activities in the IRTAD countries.



Figure 7. Policy activities in IRTAD member countries



Figure 8. Short-term change Road fatalities: 2012 in comparison to 2011

Note: provisional data for Jamaica, United States and Canada. Real data for the Netherlands.

Figure 9. Medium term change Road fatalities: 2012 in comparison to 2000



Source: IRTAD. Note: provisional data for Canada, Jamaica and the United States. Real data for the Netherlands.

Trends in Death Rates

This section presents the performance of IRTAD countries in relation to various road safety indicators.

Measuring the mortality rate and fatality risk

To measure road safety performance two different indicators can be used: the number of fatalities or (serious) injuries per head of population (mortality rate resp. morbidity rate) or the number of fatalities or (serious) injuries per distance travelled by (motorised) vehicles (fatality rate or casualty rate). The first indicator is used in the health sector, since it permits comparisons with other causes of injury and death, including infectious diseases. In the transport sector it has been common to use fatalities per distance travelled (e.g. fatalities per million vehicle-kilometres) as a principal indicator. If good data on kilometres travelled is not available a proxy is used: per 10 000 vehicles. Both indicators are used next to each other and they serve different purposes.

Fatalities per 100 000 head of population. The number of inhabitants is the denominator most often used, as the figure is readily available in most countries. This rate expresses the mortality rate, or an overall risk of being killed in traffic, for the average citizen. It can be compared with other causes of death, like heart disease, HIV/Aids, etc. This is a particularly useful indicator to compare risk in countries with comparable levels of motorisation. It is, however, not very meaningful to compare safety levels between high-motorized countries and countries where the level of motorisation is low.

Fatalities per billion vehicle-kilometres (or fatalities per billon person-kilometres, taking vehicle occupancy into account). This is the indicator to describe the safety quality of road traffic. Only a limited number of countries collect data on distance travelled.

Fatalities per 10 000 registered (motorised) vehicles. This rate can be seen as an alternative to the previous indicator, although it differs in that the annual distance travelled is unknown. This indicator can therefore only be used to compare the safety performance between countries with similar traffic and car-use characteristics. It requires reliable statistics on the number of vehicles. In some countries, scrapped vehicles are not systematically removed from the registration database, thereby undermining accuracy. This indicator does not take into account non-motorised vehicles (such as bicycles), which can in some countries represent a large part of the vehicle fleet and of the fatality figures. Most countries report their vehicle fleet without mopeds.

Fatalities per head of population

Table 4 shows the evolution of mortality expressed in terms of deaths per 100 000 population since 1970, and the evolution in risk expressed in terms of deaths per billion vehicle-kilometres.

Thirteen countries now constitute the league of well-performing countries with mortality rates in terms of road fatalities per 100 000 population of five or less. In 2012, five countries even managed to lower this rate to 3 or less: United Kingdom, Iceland, Norway, Denmark and Sweden (see Figure 10).

	Killed per 100 000 inhabitants							Killed per billion v-km				
Country	1970	1980	1990	2000	2010	2012	1970	1980	1990	2000	2010	2012
Argentina	-	14.5	-	-	12.6	12.4	-	-	-	-	-	-
Australia	30.4	22.3	13.7	9.4	6.1	5.7	49.3	28.2	14.4	9.3	6.1	5.6
Austria	34.5	26.5	20.4	12.2	6.6	6.3	109.0	56.3	32.0	15.0	7.3	6.9
Belgium	31.8	24.3	19.9	14.4	7.7	6.9	104.6	50.0	28.1	16.3	8.5	7.7
Cambodia	-	-	-	-	12.7	13.4	-	-	-	-	-	-
Canada	23.8	22.3	14.3	9.5	6.6	5.8 ^e	-	-	-	9.3	6.5	5.9 ^e
Chileª	-	-	15.7	14.3	12.1	11.4	-	-	-	-	-	-
Colombia ^{a*}	-	-	-	16.5	12.1	12.7	-	-	-	-	-	-
Czech Republic	20.2	12.2	12.5	14.5	7.6	7.1	-	53.9	48.3	36.7	16.2	15.7
Denmark	24.6	13.5	12.3	9.3	4.6	3.0	50.5	25.0	17.3	10.7	5.6	3.4
Finland	22.9	11.5	13.0	7.7	5.1	4.7	-	20.6	16.3	8.5	5.1	4.7
France	32.5	25.4	19.8	13.7	6.4	5.8	90.4	43.9	25.7	15.6	7.1	6.5
Germany	-	-	14.2	9.1	4.5	4.4	-	-	19.7 ^f	11.3	5.2	5.0
Greece	12.5	15.1	20.3	18.7	11.1	9.1 ^p	-	-	-	-	-	-
Hungary	15.8	15.2	23.4	11.7	7.4	6.1	-	-	-	-	-	-
Iceland	9.8	11	9.5	11.5	2.5	2.8	-	26.5	14.9	13.8	2.5	2.9
Ireland	18.3	16.6	13.6	11.0	4.7	3.5	44.3	28.4	19.2	11.5	4.5	3.4
Israel	17.1	10.8	8.7	7.1	4.6	3.3	87.9	38.8	22.4	12.4	7.1	5.2
Italy	20.5	16.4	12.8	12.4	6.8	6.0	-	-	-	-	-	-
Jamaicaª	-	-	-	12.9	11.8	11.4 ^p	-	-	-	-	-	-
Japan	21	9.7	11.8	8.2	4.5	4.1	96.4	29.3	23.2	13.4	8.0	7.2
Korea	10.9	16.9	33.1	21.8	11.3	10.8	-	-	-	49.5	18.7	18.4
Lithuania ^b	-	-	26.9	17.3	9.2	10.0	-	-	-	-	-	-
Luxembourg	39.0	27.0	18.7	17.5	6.4	6.5	-	-	-	-	-	-
Malaysia ^b	-	-	22.7	25.9	23.8	23.6	-	-	-	26.3	16.2	13.4
Netherlands	24.6	14.2	9.2	7.3	3.9	3.9	-	26.7	14.2	10.0	4.9	4.9
New Zealand	23.0	18.8	21.4	12.0	8.6	6.9	-	-	-	13.6	9.4	7.7
Norway	14.5	8.9	7.8	7.6	4.3	2.9	41.7	19.3	12.0	10.5	4.9	3.3
Poland	10.5	16.9	19.3	16.4	10.2	9.2	-	-	-	-	-	-
Portugal	20.5	29.3	29.3	20.1	8.8	6.8	-	-	-	-	-	-
Serbia ^c	-	-	20.0	14.0	9.0	9.7	-	-	-	-	-	-
Slovenia	36.1	29.5	25.9	15.8	6.7	6.3	166.7	96.1	65.1	26.7	7.7	7.8 ^e
Spain	16.2	17.5	23.3	14.4	5.4	4.1	-	-	-	-	-	-
Sweden	16.3	10.2	9.1	6.7	2.8	3.0	35.3	16.4	12.0	8.5	3.2	3.6
Switzerland	26.6	19.2	13.9	8.3	4.2	4.3	56.5	30.9	18.6	10.6	5.2	5.6
United Kingdom	14.0	11.0	9.4	6.1	3.1	2.8	37.4 ^d	21.9 ^d	12.8	7.4	3.8	3.6 ^p
United States	25.8	22.5	17.9	14.9	10.7	10.7 ^p	29.6	20.8	12.9	9.5	6.9	7.1 ^p

Table 4. Road fatalities per 100 000 population and per billion vehicle-km

Death within 30 days. Police recorded data (except the Netherlands: real data for 2000 onwards) For recent methodology changes in calculation of the fatality data in Austria, Spain and Portugal, see country reports.

a = IRTAD LAC

b = accession country. Data are under review. c = observer. Data not yet reviewed by IRTAD.

d = Great Britain.

e = 2011.f = 1991 p= provisional.

* Information provided by CFPV not validated by the Government of Colombia.



Figure 10. Road fatalities per 100 000 population in 2012

Since 1970, substantial progress has been made in all countries. In Luxembourg (from 39.0 to 6.5), Switzerland (from 26.6 to 4.3) and the Netherlands (from 24.6 to 4.0), the rate in terms of fatalities per 100 000 population has been divided by more than six.

In the last decade (2000-2012), the rate has been reduced by two in about half of the countries. The greatest improvements were seen in Iceland (-75%), Spain (-71%), Denmark (68%), Ireland (68%), Portugal (-66%) and Luxembourg (63%) as well as for Slovenia, France and Sweden (reduction greater than 55%; see Table 4).

While the mortality rate is useful for comparing the performance of countries with similar levels of development and motorisation, it should not be used as a universal tool to rank all countries.

Fatalities per vehicle-kilometre

Data on risks expressed in terms of deaths per billion vehicle-kilometres are summarised in Figure 11. Analysis in terms of fatalities over distance travelled is a very useful indicator for assessing the risk of travelling on the road network. However, only a subset of IRTAD countries collects regular data on vehicle-kilometres.

Based on this indicator, the situation has also improved substantially for all countries for which data are available. In 2012, the best-performing countries recorded less than five deaths per billion vehicle-kilometres; namely, Norway, Ireland, Great Britain, Sweden, Iceland, Finland, Denmark and the Netherlands.

Source: IRTAD.

Note: Provisional data for Colombia, Jamaica and the United States. Canada: data 2011. Real data for the Netherlands.



Figure 11. Road fatalities per billion vehicle-kilometres in 2012

Source: IRTAD

Note: Provisional data for the United States. Canada and Slovenia: data 2011. Real data for the Netherlands.

Fatalities per registered vehicle

Figure 12 illustrates risk exposure expressed as the number of deaths per 10 000 registered vehicles. In the absence of data on vehicle kilometres for many IRTAD countries, the fatality rate per registered vehicle may be used as an approximation of exposure in order to describe risks and make comparisons between countries.



Figure 12. Road fatalities per 10 000 registered vehicles in 2012

Source: IRTAD. Note: Ireland: total vehicles; Canada: data 2011; United Stats provisional data; Colombia: incl. mopeds.

The Fight Against Serious Injuries

Several IRTAD countries have shown remarkable reductions in road fatalities over the last decades. However, the numbers of serious injuries are usually decreasing at a much slower pace and many survivors of severe crashes will never recover completely. According to data from the German DGU Trauma Registry¹, the number of very severely injured – i.e. persons who are likely to suffer permanent consequences from a crash – did not increase at all in recent years. It goes without saying that severe injury not only entails grave consequences for people's quality of life but also on the economy.

Police records alone are usually inadequate to carry out analysis on the nature and consequences of serious injuries. Moreover, international comparisons are currently unfeasible, as counts and definitions of a "serious injury" vary widely between the member states. The JTRC report, "Reporting on Serious Road Traffic Casualties"², outlines options for combined analysis of police and hospital data and devises a common definition of serious injuries on the basis of the Abbreviated Injury Scale (AIS), proposing that an injury at or above a Maximum AIS score of 3 (MAIS 3+) should be defined as serious.

Currently, IRTAD encourages its member states to set up adequate mechanisms for such combined analysis and will gradually enlarge the database to host additional country-wise information on the development of serious injury counts.

Likewise, the European Commission agreed with the EU Member States to provide MAIS3+ data by 2015 and will enlarge the CARE³ database accordingly. The Commission proposed three potential methods for this procedure:

- Continue to use police data but apply a correction coefficient;
- Report the number of injuries based on data from hospitals;
- Create a link between police and hospital data.

A first analysis for the small number of countries which are already able to provide MAIS3+ data, among them Sweden, the UK, Spain and the Netherlands, shows that in part results vary substantially: the reason behind this is that different versions are currently in use, both of the AIS and the ICD⁴, the basis from which the AIS code is often derived. Moreover, results vary according to which of the above methods (or combinations thereof) are used by a country.

Therefore, IRTAD will now join forces together with the European Commission and expert organisations such as FERSI⁵ in order to devise harmonized methodologies to produce comparable data on serious injuries in due time; only when their true character and frequency is assessed in a sound and uniform way, can effective road safety management mechanisms be employed (such as target setting, implementation, monitoring and evaluation).

¹ http://www.bast.de/DE/Publikationen/Archiv/Infos/2009-2008/10-2009.html

² http://internationaltransportforum.org/irtadpublic/pdf/Road-Casualties-Web.pdf
³ Community database on Assidents on the Boads in Europe

³ Community database on Accidents on the Roads in Europe

⁴ International Statistical Classification of Diseases and Related Health Problems

⁵ Forum of European Road Safety Research Institutes, www.fersi.org

National Road Safety Strategies

The year 2011 was marked by the launch of the UN Decade of Action for Road Safety. For this occasion, the UN called on Member states, international agencies, civil society, businesses and community leaders to ensure that the Decade leads to real improvement, and recommended governments to develop national action plans for the decade 2011-2020. As a response, several countries released or updated in 2011 their national road safety strategies.

This section summarises the strategies and targets adopted by IRTAD countries, or refers to ongoing policies. More information can be found in the individual country reports that follow.

Country/Strategy/timeframe	Vision	Targets
Argentina National road safety strategy	Based on the UN Road Safety Plan for the Decade of Action for Road Safety	-50% fatalities by 2014 Base year 2009
		Specific targets for 2014 and 2020 are being developed
Australia National road safety strategy 2011-2020	Safe System No-one should be killed or seriously injured on Australia's roads	-30% (at least) fatalities by 2020 -30% (at least) severely injured by 2020 Base year 2008-2010
Austria Austrian road safety programme 2011-2020	Safe system "Become one of the five safest countries in Europe"	-50% fatalities by 2020, based on the average for the years 2008-10 (Interim target: -25% by 2015) -40% serious injuries by 2020, based on the average for the years 2008-10 (Interim target: -20% by 2015) -20% injury accidents by 2020, based on the average for the years 2008-2010 (Interim targets: -10% by 2015)
Belgium Recommendations for 20 priority measures 2011-2020	EU Road Safety Target adopted	-50% fatalities in 2020 in comparison to 2010 (420 road deaths in 2020)
Cambodia Second road safety action plan 2011-2020 (expected to be approved by the Council of Ministers in 2014)	Based on the UN Road Safety Plan for the Decade of Action for Road Safety	Reduce by 50% the forecasted number of fatalities by 2020 Several sub-targets on helmet wearing rates, speed, drink-driving
Canada <u>Road Safety Strategy (RSS) 2015</u> 2011-2015	"Rethink Road Safety" to make Canada's roads the safest in the world	No hard numerical targets To achieve downward trends in fatalities and serious injuries.
Chile Road safety plan 2011-2014 Road safety plan 2015-2020 in preparation		-20% road deaths by 2014 in comparison with 2011 level
Colombia National Road Safety Plan 2013- 2021 PNSV adjusted by Ministry of Transport (public consultation closed on 30	Based on the UN Road Safety Plan for the Decade of Action for Road Safety	
January 2014, <u>draft plan available</u>)		
Czech Republic Strategic Road Safety Plan 2011-2020	Vision Zero	Reduce fatality rate to EU 27 average. No more than 360 fatalities in 2020 (-60%) No more than 2 100 seriously injured in 2020 (-40%)

Table 5. National road safety strategies and targets

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28 – National Road Safety Strategies

Country/Strategy/timeframe	Vision	Targets
Denmark	Based on Vision Zero	-50 % fatalities by 2020 (less than 120 killed) (based on EU Road
Danish Road Safety Commission		Safety target)
National Action Plan 2013-2020		-50% serious and slightly injured road users
European Union Road safety policy orientations 2011-2020	Towards Zero	-50% fatalities by 2020 (base year: 2010)
<u>2011-2020</u>	Vision Zoro	Lass than 210 fatalities (or 40 fatalities per million inhobitante) by 2014
National Road Safety Strategy published in 2012	VISION 2010	Less than 137 fatalities (or 24 fatalities per million inhabitants) by 2014 Less than 137 fatalities (or 24 fatalities per million inhabitants) by 2020 Less than 5 750 injuries by 2020 (based on EU Road Safety target) Long term target: less than 100 fatalities by 2025
France		-50% fatalities by 2020 (less than 2000 fatalities) (based on EU Road Safety target)
Germany Road safety programme 2011-2020		-40% fatalities by 2020 (base year: 2010)
Greece National strategic road safety plan	Developing a road safety culture	-50 % fatalities by 2020 (based on EU Road Safety target); base year: 2010
2011 – 2020		interim targets: reduction by 90 road fatalities per year between 2010-2014 and 50 road fatalities per year between 2014-2020
Hungary		-50% fatalities by 2015
Road safety programme 2011-2013		-50% injury accidents by 2015: base year: 2001. -50% fatalities by 2020 (based on EU Road Safety target); base year: 2010
Iceland Traffic Safety Plan		Rate per 100 000 population should not be higher than in the best countries by 2022
2011-2022		Average annual reduction in killed and seriously injured of 5%. 11 sub targets defined
Ireland		Reduction of road collision fatalities on Irish roads to 25 per million population or less by 2020.
2013-2020		Provisional target for the reduction of serious injuries by 30% from 472 (2011), or fewer, to 330 by 2020 or 61 per million population. Specific targets for reducing speed and to increase restraint use.
Israel		Less than 270 fatalities per year by 2015
5 year plan		Reduce the fatality rate to less than 4.0 fatalities per billion km travelled, Rank among the 5 safest countries based on fatalities per km travelled New target (under consideration): less than 240 fatalities by 2020.
Italy National Road Safety Plan		-50% fatalities by 2020 (under consideration) (based on EU Road Safety target)
Horizon 2020 (in preparation)		mid-term target (under consideration) an average annual reduction rate of fatalities of 7%, corresponding to a reduction of 38% in 2017 (with reference to 2010 fatalities).
Jamaica		Less than 240 deaths by 2016.
Japan	Make Japan the safest country for road traffic	Less than 3 000 deaths by 2015
9 th Traffic Safety Programme 2011-2015		Less than 700 000 casualties by 2015
Korea 7th National transport safety plan 2012-2016	Reach the average safety level of OECD countries	Less than 1.3 fatalities/10 000 vehicles by 2016 (This represents a 40% reduction in fatalities compared to 2010 level (2010: 5 505 -> 2016: 3 000 fatalities) Less than 0.5 fatalities/10 000 vehicles by 2020
Lithuania Road safety strategy 2011-17		Less than 6 killed per 100 000 population in order to be ranked among the 10 best performing countries in the EU
Luxembourg		-50 % fatalities by 2020 (based on EU Road Safety target); base year: 2010

Country/Strategy/timeframe	Vision	Targets		
Malaysia In preparation	Based on the UN Road Safety Plan for the Decade of Action for Road Safety	Reduce by 50% the forecasted number of fatalities by 2020		
Netherlands	Sustainable safety	No more than 500 fatalities by 2020		
Road safety strategic plan 2008–2020		No more than 10 600 serious road injuries (MAIS2+) by 2020		
New Zealand	Safe System	No overall targets		
<u>Safer Journeys: Road safety</u> <u>strategy</u> 2010-2020	A safe road system increasingly free of death and serious injury	Several sub targets		
Nigeria	Becoming one of the 20th safest roads in the world by the year 2020	Rreduction of road traffic crashes by 50% in 2015 in comparison with 2007 level		
		Reduction by 50% of the number of fatalities by 2020 in comparison with 2010 level (based on UN Decade of Action Plan)		
Norway Road Safety Strategy 2014-2024	Vision Zero	Reduction by 50% of the number of fatalities by 2024. No more than 500 fatalities and serious injuries by 2024.		
Poland	Vision Zero	-50% fatalities by 2020 (based on EU Road Safety target)		
National Road Safety Programme 2013-2020		-40% severely injured by 2020 Base year 2010		
Portugal Road Safety Strategy 2013-2015 Second period 2008-2015 under		62 fatalities per million inhabitants in 2015		
Serbia				
National Strategy 2013-2020 (expected to be approved in 2014)				
Slovenia	Vision Zero	-50 % fatalities by 2022 or less than 35 fatalities per million inhabitants		
<u>National road safety programme</u> 2013 – 2022	no fatalities and no one seriously injured on Slovenian roads	-50 % seriously injured by 2022 or less than 230 seriously injured per million inhabitants		
Spain	Safe system/Vision Zero.	Less than 3.7 killed per 100 000 population		
Road Safety Strategy	Citizens have the right to a Safe Mobility System in which everyone, citizens and	-25% seriously injured		
2011 – 2020	agents involved, have a responsibility	Several targets for various performance indicators (seatbelt, speed, drink-driving, etc.)		
Sweden	Vision Zero	-50% fatalities between 2007 and 2020 (the average for 2006-2008 is		
No safety plan in a traditional sense		used as the base figure), i.e. max. 220 deaths by 2020. -25% severely injured between 2007 and 2020.		
Management by Objectives for Road Safety Work, Towards the 2020 Interim targets				
Switzerland <u>Via Sicura</u> Adopted in June 2012 by Swiss Federal Council		No hard numerical targets Range of targeted measures		
United Kingdom (Great Britain) Strategic framework for road	To ensure that Britain remains a world leader on road safety.	 Action plan has not set quantitative targets as such, but a modelling exercise has been conducted to assess the expected casualty reduction 		
A 5 year road safety strategy for 2011-2015		 outcomes framework to monitor progress on road safety, including six key, and a range of other, indicators 		
United States		Performance targets set through Less than 1.02 fatalities per 100 million vehicle miles travelled in 2014		

Legislation on Key Safety Issues

Drink driving, speeding, non-wearing of seatbelts and helmets represent common safety challenges in all countries. Experience has shown that regulation, enforcement and education to modify behaviour on these fronts bring large benefits.

The following tables summarise information on legislation on drink-driving, speed limits, seatbelt wearing and helmet wearing.

Table 6. Maximum blood alcohol content in 2014

Country	General BAC level	Differentiated BAC for novice drivers, professional drivers
Argentina	0.5g/l	0.0 g/l professional drivers
Australia	0.5 g/l	0.0 g/l for novice drivers
		0.2 g/l for professional drivers
Austria	0.5 g/l	0.1 g/l moped riders < 20 years old and novice and professional drivers
Belgium	0.5 g/l	0.2 g/l for professional drivers will enter into force in 2015
Cambodia	0.5 g/l	No
Canada	0.8 g/l Most provinces have administrative sanctions in place at 0.4 g/l or 0.5 g/l.	Novice or young drivers in most provinces are subject to 0 g/l BAC (administrative) sanctions
Chile	0.3 g/l	
Colombia	0.2 g/l	
Czech Republic	0.0 g/l	-
Denmark	0.5 g/l	-
Finland	0.5 g/l	-
France	0.5 g/l	0.2 g/l for bus/coach drivers
Germany	0.5 g/l Drivers with a BAC above 0.3 g/l can have their licenses suspended if their driving ability is impaired	0.0 g/l for novice drivers
Greece	0.5 g/l	0.2 g/l, professional drivers, motorcycles and moped operators
Hungary	0.0 g/l (sanctions when BAC > 0.2g/l)	
Iceland		
Ireland	0.5 g/l	0.2g/l for novice and professional drivers
Israel	0.5 g/l	-
Italy	0.5 g/l	0 g/l for novice and professional drivers.
Jamaica	0.8 g/l	
Japan	0.3 g/l	
Korea	0.5 g/l	-
Lithuania	0.4 g/l	0.2 g/l for novice and professional drivers
Luxembourg	0.5 g/l	0.2 g/l for novice and professional drivers
Malaysia	0.8 g/l	
Netherlands	0.5 g/l	0.2 g/l for novice drivers (first 5 years)
New Zealand	0.8 g/l. A 0.5 g/l limit will be submitted to Parliament in 2014	0.0 g/l for drivers under 20 years old and for repeating offenders
Nigeria	0.5 g/l	
Norway	0.2 g/l	
Poland	0.2 g/l	-
Portugal	0.5g/l	0.2 g/l for novice and professional drivers (since 1/1/14)
Serbia	0.3 g/l	0.0 g/l for novice and professional drivers and for PTW operators
Slovenia	0.5 g/l	0.0 g/l for novice and professional drivers
Spain	0.5 g/l	0.3 g/l novice and professional drivers
Sweden	U.2 g/I	
Switzerland	0.5 g/l	U.U g/I for novice and professional drivers (since 1/1/14)
United Kingdom	U.8 g/I	
United States	U.8 g/l	U.4 g/l for professional drivers

(Recent changes are written in blue)

Country	Urban areas	Rural roads	Motorways
Argentina	30 – 60 km/k	110 km/h	130 km/h
Australia	50 km/h	100 or 110 km/h	110 km/h
	60 to 80 km/h (arterial roads)		
Austria	50 km/h	100 km/h	130 km/h
Belgium	30 or 50 km/h	70 or 90 km/h	120 km/h
Cambodia	40 km/h	90 km/h	
Canada	40 – 70 km/h	80 – 90 km/h	100 -110 km/h
Chile	60 km/h	100 km/h	120 km/h
Colombia	80 km /h 30 km/h near schools and in residential areas	120 km/h	n.a.
Czech Republic	50 km/h	90 km/h	130 km/h
Denmark	50 km/h	80 km/h	130 km/h
Finland	50 km/h	100 km/h (summer) 80 km/h (winter)	120 km/h (summer) 100 km/h (winter)
France	50 km/h	90 km/h	130 km/h
Germany	50 km/h	100 km/h	No limit but 130 km/h is recommended
Greece	50 km/h	90 km/h	130 km/h
Hungary	50 km/h	90 km/h	130 km/h (110 km/h on semi-motorways)
Iceland	50 km/h	90 km/h paved roads	n.a.
		80 km/h gravel roads	
Ireland	50 km/h	80 km/h or 100 km/h	120 km/h
Israel	30, 50, 70 km/h	80, 90, 100 km/h	110 km/h
Italy	50 km/h	90 – 110 km/h	130 km/h. In theory, the motorway operator may decide to increase the limit up to 150 km/h if stringent requirements are met.
Jamaica	50 km/h	50 km/h	70 km/h or 110 km/h
Japan	40, 50, 60 km/h	50, 60 km/h	100 km/h
Korea	60 km/h	60-80 km/h	110 km/h (100 km/h in urban areas),
Lithuania	50 km/h	90 km/h (70 on gravel roads)	130 km/h (110 km/h in winter)
Luxembourg	50 km/h	90 km/h	130 km/h
Malaysia	50 km/h	90 km/h	110 km/h
Netherlands	50 km/h	80 km/h	130 km/h
New Zealand	50 km/h	100 km/h	100 km/h
Nigeria	50 km/h	80 km/h	100 km/h
Norway	50 km/h	80 km/h	100 km/h
Poland	50 km/h	90 – 120 km/h	140 km/h
Portugal	50 km/h	90 km/h	120 km/h
Serbia	50 km/h	80 km/h	120 km/h
Slovenia	50 km/h	90 km/h	130 km/h
Spain	50 km/h	90 or 100 km/h	120 km/h
Sweden	30-40-50 km/h	60-70-80-90-100 k/h	110 km/h or 120 km/h
Switzerland	50 km/h	80 km/h	120 km/h
United Kingdom	30 mph (48 km/h))	60 mph (96 km/h)	70 mph (113 km/h)
United States	Set by each state	Set by each state	55-80 mph (88-129 km/h) Set by each state

Table 7. General speed limits for passenger cars in 2014

Country	Front seats Rear seats		seats	
	Date of application	Wearing rate	Date of application	Wearing rate
Argentina	Yes, 1995	38% (average), 42% (driver)	Yes, 1995	26%, 33% for children
Australia	Yes, 1970s	Around 97%	Yes	Around 96%
Austria	Yes, 1984	89%	Yes, 1990	76%
Belgium	Yes, 1975	86%	Yes, 1991	Unknown
Cambodia	Yes, 2007	16%	No	Unknown
Canada	Yes, 1976-1988	95% (2010)	Yes, 1976-1988	Unknown
Chile	Yes, 1985	Unknown	Yes, 2006	Unknown
Colombia	Yes	Unknown	No	Unknown
Czech Republic	Yes, 1966	97%	Yes, 1975	66%
Denmark	Yes, 1970s	94%	Yes, 1980s	81%
Finland	Yes, 1975	87-95%	Yes, 1987	86%
France	Yes, 1973	98.5%	Yes, 1990	84%, 90% for children
Germany	Yes, 1976	97%	Yes, 1984	97%
Greece (2009)	Yes, 1987	77% (driver), 74% (passengers)	Yes, 2003	23%
Hungary	Yes, 1976	87%	Yes, 1993 (outside built up areas), 2001 (inside built up areas)	68%
Iceland	Yes	84%	Yes	65%
Ireland	Yes, 1979	93%	Yes, 1979	89%, 96% for children
Israel	Yes, 1975	97% (driver), 95% (passengers)	Yes, 1995	74%
Italy	Yes, 1988	63% (urban areas) 75% (outside urban areas)	Yes, 1994	10% (2009-2011)
Jamaica	Yes, 1999	Unknown	Yes, 1999	Unknown
Japan	Yes, 1985	98%	Yes, 2008	61%, 74% for children
Korea	Yes, 1990	88% (driver) on motorways 76% (passengers) on motorways	Yes on motorways, since 2008	9.4% on motorways
Lithuania	Yes	70%	Yes	71%
Luxembourg	Yes, 1975	80% in 2003	Yes, 1992	Unknown
Malaysia	Yes, 1978	91% (driver),83% (passengers)	Yes, 2009	11%
Netherlands	Yes, 1975	97% in 2010	Yes, 1992	82% in 2010
New Zealand	Yes, 1972	96%	Yes, 1979	87% in 2011, 92% for children
Nigeria	Yes, 1997	80%		< 5%
Norway	Yes, 1975	95%	Yes, 1985	No monitoring
Poland	Yes, 1991	84%	Yes, 1991	59%: 88% for children
Portugal	Yes, 1978	unknown	Yes, 1994	unknown
Serbia	Yes, 1982	70%	Yes, 2009	3%
Slovenia	Yes, 1977	94%	Yes, 1998	66%
Spain	Yes, 1974 outside urban areas, 1992 inside urban areas	91%	Yes, 1992	81%
Sweden	Yes, 1975	98%	Yes, 1986	84%, 96% for children
Switzerland	Yes, 1981	92% (driver); 91% (passengers)	Yes, 1994	72%, 93% for children
United Kingdom	Yes, 1983	95% in 2009	Yes, 1989 (children); 1991 (adults)	89% in 2009
United States	Primary law in 33 out of 50 states. No law in 1 state	87%	Varies by State	74% in 2011

Table 8. Seatbelt wearing rates in front and rear seats, 2012 or 2013

Country	Powered two wheelers		Cyclists	
	Helmet law	Wearing rate	Helmet law	Wearing rate
Argentina	Yes	61% drivers 54% passengers	No	
Australia	Yes		Yes	
Austria	Yes	Nearly 100%	Yes for children up to 12	
Belgium	Yes	Unknown	No	
Cambodia	Yes for the drivers of PTW > 49cc not yet compulsory for passengers			
Canada	Yes		In some jurisdictions	
Chile	Yes	Around 99%	No	
Colombia	Yes, since 1998		No	
Czech Republic	Yes	Nearly 100%	Yes for children up to 18	
Denmark)	Yes	96% (in 2006)	No	
Finland	Yes		Yes since 2003 but not enforced	44%
France	Yes, since 1973	93%	No	
Germany	Yes	99%	No	13%
Greece	Yes	75% riders 46% passengers	No	
Hungary	Yes since 1965 for motorcyclists, 1997 for moped riders outside built up areas, 1998 for moped riders in urban areas.	Nearly 100%	No	
Iceland	Yes		Yes for children up to 14	
Ireland	Yes	98%	No	52%
Israel	Yes	Nearly 100%	No	
Italy	Yes since 1986 for young people below 20; since 2000 for all	76-99%, varies by region	No	
Jamaica	Yes	Very low		
Japan	Yes	Around 99%	No	
Korea	Yes	75%	No	
Lithuania	Yes		Yes for children below 18	
Luxembourg	Yes, since 1976	Unknown		
Malaysia	Yes, since 1973	About 70%	No	
Netherlands	Yes, motorcycles since 1972; mopeds since 1975 Not compulsory on mofas (max. speed 25 km/h)	Riders: 96-100%	No	
New Zealand	Yes		Yes since 1994	92%
Nigeria	Yes	60%		
Norway	Yes	Nearly 100%	No	52% (for cyclists above 12)
Poland	Yes since 1997	Nearly 100%	No	
Portugal				
Serbia	Yes since 2009	94% for motorcyclists 84% for moped riders	No	
Slovenia	Yes		Yes for children up to 14	
Spain	Yes	Nearly 100%	Yes, except in built up areas	
Sweden	Yes	96-99%	Yes for children below 15	60-70% children 30% adults
Switzerland	Yes, motorcycles since 1981; mopeds since 1990	Nearly 100%	No for "regular" bicycles Yes for e-bikes > 25km/h	46% adults 63% for children 88%
United Kingdom	Yes, motorcycles since 1973; mopeds since 1977		No	
United States	No national law 19 states require helmet use by all PTW operators and passengers. 28 states requires helmet use by some segment of population 3 states have no helmet law	60% in 2012	21 states and the District of Columbia have enacted age- specific bicycle helmet laws	

Table 9.	Helmet	laws and	wearing	rates.	2012	or	2013
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List of IRTAD Members and Observers

Argentina	National Road Safety Agency (ANSV)	Ms Corina PUPPO Mr Pablo ROJAS
Australia	Department of Infrastructure and Transport ARRB	Mr John GOLDSWORTHY Mr. Blair TURNER
Austria	Kuratorium für Verkehrssicherheit (KFV)	Mr. Robert BAUER Mr Klaus MACHATA
Belgium	Belgian Road Safety Institute (BIVV - IBSR)	Mr Yvan CASTEELS Ms Heike MARTENSEN Mr Wouter VAN DEN BERGHE
Cambodia	National Road Safety Committee	Mr. Voun CHHOUN
Canada	Transport Canada	Ms Kim BENJAMIN Mr Michael MARTH
Chile	Comisión Nacional de Seguridad de Tránsito (CONASET)	Ms. Danica MÍMICA PORRAS Ms Francisca YAÑEZ CASTILLO
Colombia	Corporación Fondo de Prevención Vial	Ms. Salomé NARANJO LUJAN Ms Alexandra ROJAS LOPERA
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Denmark	Road Directorate Danish Technical University University of Alborg	Mr Sven Krarup NIELSEN, Mr Stig HEMDORFF Ms Tove HELS Ms Camilla SLOTH ANDERSEN
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France	Observatoire National Interministériel pour la Sécurité Routière	Mr Christian MACHU Ms Manuelle SALATHE Mr. Thierry ROUSSEAU Ms. Ruth BERGEL-HAYAT Mr Sylvain LASSARRE
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Iceland	Icelandic Road Administration	Ms Audur Thora ARNADOTTIR
Ireland	Road Safety Authority	Mr Yaw BIMPEH Ms. Velma BURNS
Israel	National Road Safety Authority	Ms Rachel GOLDWAG Ms. Rinat ZAIG
	OR YAROK	Ms Tsippy LOTAN

Chair: Mr Fred Wegman (Netherlands)

Italy	University La Sapienza	Mr Luca PERSIA
		Mr Davide Shingo USAMI
	Automobile Club d'Italia (ACI)	Ms Lucia PENNISI
Jamaica	Ministry of Transport, Works and Housing	Mr Kenute HARE
Japan	National Police Agency	Mr. Kazunori FUJIMAKI Mr Tatsuro MITSUI
	National Research Institute of Police Science (NRIPS)	Mr Goro FUJITA Mr Kenji HAGITA Ms Kazuko OKAMURA
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ACEM – European Motorcycle Manufacturers Association	Ms Veneta VASSILEVA
Daimler AG	Mr Jorg BAKKER
DEKRA Automobile	Mr Walter NIEWOEHNER
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Greece	EL.STAT.	Ms Nektaria TSILIGAKI
Iceland	Icelandic Transport Authority (ICETRA)	Mr. Gunnar Geir GUNNARSSON
Italy	ISTAT	Ms. Silvia BRUZZONE

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Road Safety Annual Report 2014

Summary

The IRTAD Annual Report 2014 provides an overview for road safety indicators for 2012 in 37 countries, with preliminary data for 2013, and detailed reports for each country.

The report outlines the crash data collection process in IRTAD countries, describes the road safety strategies and targets in place and provides detailed safety data by road user, location and age together with information on recent trends in speeding, drink-driving and other aspects of road user behaviour.

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