



# Road Safety Country Overview





## **Structure and Culture**

#### **Basic Data**

Table 1: Basic data of Portugal in relation to the EU average

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Basic data of Portugal	EU average		
<ul> <li>Population: 10,37 million inhabitants (2015) [2]</li> <li>Area: 92.090 km<sup>2</sup> (2015) [2] (Water 0,67%) (2015)[4]</li> </ul>	18,15 million (2015) 159.663 km <sup>2</sup> (2015) 2,94% water (2015)		
- Climate and weather conditions (capital city; 2015)[3]:	(2015)		
<ul> <li>Average winter temperature (Nov. to April): 12,8°C</li> </ul>	6,5°C		
<ul> <li>Average summer temperature (May to Oct.):</li> <li>20,3°C</li> </ul>	17,8°C		
- Annual precipitation level: 774 mm	651 mm		
- Exposure <sup>1</sup> : 288,96 billion passenger km (2014)[2]	189 billion passenger km (2014)		
- 0,55 vehicles per person (2014)[1]	0,62 (2014)		

Sources: [1] IRTAD; [2] EUROSTAT; [3] national sources; [4] CIA

Portugal has a Mediterranean climate.

## **Country characteristics**

Table 2: Characteristics of Portugal in comparison to the EU average

Characteristics of Portugal	EU average
- Population density: 113 inhabitants/km² (2015)	114 inhabitants/km²
[2]	(2015)
- Population composition (2015) [2]:	
14,4% children (0-14 years)	15,6% children
65,3% adults (15-64 years)	65,5% adults
20,3% elderly (65 years and over)	18,9% elderly (2015)
- Gross Domestic Product (GDP) per capita:	
€16.600 (2015) [2]	€26.300 (2015)
- 63,5% of population lives inside urban area	73,3% (2015)
(2015)[4]	
- Special characteristics [4]: mountainous north	
Sources: [1] IRTAD; [2] EUROSTAT; [3] national sources; [4] CIA	

 $<sup>^{1}</sup>$ No data available for traffic. exposure is measured by billion passenger kilometres instead.



## Structure of road safety management

The objectives of the National Road Safety Strategy were established from the joint analysis based on the joint study of the recent developments in pattern of fatalities in Portugal and its constraints, how numbers progressed countries that in 1999 and 2003 had indicators similar to those reached by Portugal in 2006 and the behavioral studies of drivers and the population at large carried out in the past few years by ISCTE.

The following key actors are responsible for Road Safety (RS) policy making:

Table 3: Key actors per function in Portugal			
Key functions	Key actors		
<ol> <li>Formulation of national RS strategy</li> <li>Setting targets</li> <li>Development of the RS programme</li> </ol>	<ul> <li>Autoridade Nacional de Segurança Rodoviária         (ANSR)</li> <li>Instituto Superior das Ciências do Trabalho e da         Empresa (ISCTE)</li> <li>Conselho de Segurança Rodoviária (CSR) [Road         Safety Council]</li> <li>Public Security Police</li> <li>Provincial Governments</li> </ul>		
Monitoring of the RS development in the country	<ul> <li>- Autoridade Nacional de Segurança Rodoviária (ANSR)</li> <li>- Instituto Superior das Ciências do Trabalho e da Empresa (ISCTE)</li> </ul>		
<ol><li>Improvements in road infrastructure</li></ol>	- Infrastructure Portugal (under the ministry of Economy)		
4. Vehicle improvement	<ul> <li>IMTT - Instituto da Mobilidade e Transporte Terrestre</li> <li>ACAP - Associação do Comércio Automóvelem Portugal</li> <li>National Association of Companies Trade and Auto Repair - ANECRA</li> </ul>		
5. Improvement in road user education	<ul> <li>Ministry of Education</li> <li>ANSR</li> <li>IPJ – Instituto Português da Juventude</li> <li>PRP – Prevenção Rodoviária Portuguesa</li> <li>IMTT - Instituto da Mobilidade e Transportes</li> <li>Terrestres</li> </ul>		
6. Publicity campaigns	- ANSR		
7. Enforcement of road traffic laws	- Instituto da Droga e da Toxicodependência - DirecçãoGeral da Saúde - Instituto Nacional de Medicina Legal		
8. Other relevant actors Sources: national sources			

The years 2008–2015 have been established as temporal framework for implementing a National Road Safety Strategy.



Portuguese drivers are less supportive for stricter legislation on speeding and drink-driving compared to drivers in other countries.

# Road Safety Country Overview - PORTUGAL

Attitudes towards risk taking

- Portuguese drivers are less supportive for stricter legislation on speeding and drink-driving compared to drivers in other countries.
- The perceived probability of being checked is slightly lower than the ESRA-average.

Table 4: Road safety attitudes and behaviour of drivers

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	Portugal	ESRA average
Self-reported driving behaviour	,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	ers that show at least once
In the past 12 months, as a road user, how often did you drive without respecting a safe distance to the car in front?	62%	60%
In the past 12 months, as a road user, how often did you talk on a hand-held mobile phone while driving? In the past 12 months, as a road user, how often did	46%	38%
you drive faster than the speed limit inside built-up areas?	72%	68%
Supporting stricter legislation		s that disagree e following
What do you think about the current traffic rules and penalties in your country for each of the following themes?:	48%	61%
The penalties are too severe: for speeding What do you think about the current traffic rules and penalties in your country for each of the following themes?:	78%	87%
The penalties are too severe: alcohol Do you support the following measure?: Zero tolerance for alcohol (0,0%) for all drivers	45%	41%
Perceived probability of being checked		s with answers ng categories
In the past 12 months, have you been stopped by the police for a check? <b>(once or more</b> )	46%	31%
On a typical journey, how likely is it that you (as a driver) will be checked by the police for respecting the speed limits (including checks by police car with a camera and/or GoSafe cameras)? (Very (big) chance)	35%	37%
In the past 12 months, have you been checked by the police for alcohol while driving a car (i.e., being subjected to a Breathalyser test)? <b>(once or more</b> )	19%	19%

Source: ESRA 2016

#### Legend

(comparison of country attitude in relation to average attitude of other SARTRE countries):

2-9% better 10-19% better ≥ 20% better 2-9% worse 10-19% worse

≥ 20% worse



The new National Road Safety Strategy, "PENSE 2016-2020" is being developed.

## **Programmes and measures**

#### National strategic plans and targets

- The new National Road Safety Strategy, "PENSE 2016-2020" is being developed.
- Targets (referred to 2006):

**Table 5: Road safety targets for Portugal** 

Year	Fatalities
2015	Max. 6,2 per 100.000 population
Source IRTAD 2016	

- Priority topics:
  - improvement of driver behaviour
  - protection of vulnerable road users
  - increased road safety in urban areas
  - reduction of the main risk behaviours
  - safer infrastructures and better mobility
  - promotion of vehicle safety
  - improvement in the assistance, treatment and follow-up of injured road users

(Source: IRTAD, 2015)

#### Road infrastructure

Table 6: Description of the road categories and their characteristics in Portugal

Road type	General speed limits for passenger cars (km/h)
Urban roads	50
Rural roads	90
Motorways	120

Source: IRTAD, 2016

- Special rules for:
  - Light motorcycles (A1; until 18 years): no information on speed limits
- Guidelines and strategic plans for infrastructure are available in Portugal.

Table 7: Obligatory parts of infrastructure management in Portugal and other EU countries

Obligatory parts in Portugal:	EU countries with obligation
Safety impact assessment: no	32%
Road safety audits: no	81%
Road safety inspections: no	89%
High risk site treatment: yes	74%

Source: IRTAD, 2015

 Recent activities of road infrastructure improvement have been addressing: no information

High risk site treatment is obligatory in Portugal.



Regulations in Portugal are similar to the regulations in most other EU countries.

Effectiveness of enforcement in Portugal is at the level of most EU countries.

## Traffic laws and regulations

Table 8: Description of the regulations in Portugal in relation to the most common regulations in other EU countries

	Most common in EU
Regulations in Portugal [1]	(% of countries)
Allowed BAC <sup>2</sup> levels:	
<ul><li>General population: 0,5‰</li><li>Novice drivers: 0,5‰</li><li>Professional drivers: 0,2‰</li></ul>	0,5% (61%) 0,2% (39%) and 0,0% (36%) 0,2% (36%) and 0,0% (36%)
Phoning:	
- Hand held: not allowed - Hands free: allowed	Not allowed (all countries) Allowed (all countries)
Use of restraint systems:	
<ul><li>Driver: obligatory</li><li>Front passenger: obligatory</li><li>Rear passengers: obligatory</li><li>Children: obligatory</li></ul>	Obligatory (all countries) Obligatory (all countries) Obligatory (all countries) Obligatory (all countries)
Helmet wearing:	
<ul> <li>Motor riders: Obligatory</li> <li>Moped riders: Obligatory</li> <li>Cyclists: not obligatory</li> <li>Sources: [1] EC DG-Move, 2016</li> </ul>	Obligatory (all countries) Obligatory (all countries) Not obligatory (46%)

#### **Enforcement**

Table 9: Effectiveness of enforcement effort in Portugal according to an international respondent consensus (scale = 0-10)

Issue	Score for Portugal	Most common in EU (% of countries)
Speed legislation enforcement	7	7 (43%)
Seat-belt law enforcement	8	7 (25%) and 8 (25%)
Child restraint law enforcement	8	8 (39%)
Helmet legislation enforcement	9	9 (50%)
Drink-driving law enforcement	7	8 (43%)

Source: WHO, 2015

<sup>&</sup>lt;sup>2</sup> Blood Alcohol Concentration



**Road User Education and Training** 

Portugal has compulsory road safety education at primary schools and voluntary education at secondary schools.

Table 10: Road user education and training in Portugal compared to the situation in other EU countries

Education and training in Portugal	Most common in EU (% of countries)
General education programmes:	
<ul><li>Primary school: compulsory</li><li>Secondary school: voluntary</li><li>Other groups: no information.</li><li>Driving licences thresholds:</li></ul>	Compulsory (71%) Compulsory (43%)
<ul> <li>Passenger car: 18 years</li> <li>Motorised two wheeler: mopeds: 16 years, motorcycles: 18 years</li> <li>Buses and coaches: 21 years</li> <li>Lorries and trucks: 18 years</li> </ul>	18 years (79%) 18 years (low categories) and higher ages (32%) 21 years (86%) 21 years (75%)

Sources: [1] ROSE25, 2005; [2] ETSC, 2011; [3] national sources

## **Public Campaigns**

Table 11: Public campaigns in Portugal compared to the situation in other EU countries

Campaigns in Portugal	Most common issues in EU (% of countries)
Organisation:	
<ul> <li>ANSR</li> <li>ACA-M</li> <li>Police Authorities (GNR and PSP)</li> <li>Local Authorities</li> <li>Directorate of Health</li> <li>NGOs</li> </ul>	
Main themes:	
<ul> <li>Drink-driving</li> <li>Seat-belt</li> <li>Speeding</li> <li>Fatigue</li> <li>Young people</li> <li>Vulnerable road users</li> </ul>	Drink-driving (96%) Speeding (86%) Seat-belt (79%)

Sources: [1] SUPREME, 2005; [2] ETSC, 2011; [3] national sources

## Vehicles and technology (national developments)

Table 12: Developments of vehicles and technology in Portugal, compared to the situation in other EU countries

Mandatory technical inspections:	Most common in EU (% of countries)
Passenger cars: 4-2-2-1-1-1 years etc.	Every 12 months (39%)
Motorcycles: not mandatory	Every 24 months (32%)
Buses or coaches: every year for 7 years, thereafter every 6 months	Every 12 months (61%)
Lorries or trucks: every year for 7 years, thereafter every 6 months	Every 12 months (68%)

Sources: EC website, national sources

Mandatory inspection periods in Portugal are somewhat shorter for older buses/coaches and lorries/trucks than the most common periods in the EU.



The number of speed tickets per population in Portugal is much lower than the EU average.

# Road Safety Country Overview - PORTUGAL

# **Road Safety Performance Indicators**

## Speed

Table 13: Number of speed tickets per population in Portugal versus the EU average

averaye							
Measure	2006	2014	Average annual change	EU average (2014)			
Number of speed tickets/1.000 population	9	25	13,6%	94			
Sources: [1] ETSC, 2010; [2] ETSC, 2015							

Table 14: Percentage of speed offenders per road type in Portugal compared to the EU average

Road type	2004	2012	Average annual change	EU average
Motorways	54%	45%	-2,3%	n/a
Rural roads	82%	n/a	-	n/a
Urban roads	38%	n/a	-	n/a

Sources: [1] ETSC, 2010; [2] ETSC, 2015

Table 15: Mean speed per road type in Portugal compared to the EU average

Road type	2004	2012	Average annual change	EU average
Motorways	121 km/h	118 km/h	-0,3%	n/a
Rural roads	106 km/h	n/a	-	n/a
Urban roads	45 km/h	n/a	-	n/a

Sources: [1] ETSC, 2010; [2] ETSC, 2015

#### **Alcohol**

Table 16: Road side surveys for drink-driving in Portugal compared to the EU average

Measure	2006	2013	Average annual change	EU average (2013)
Amount of tests/1.000 population	48	149	17,6%	201,6
% tested over the limit	7,3%	3,8%*	-15,1%	2,1%

Sources: [1] ETSC, 2010; [2] ETSC, 2015

\*Data from 2010

The amount of alcohol tests per population in 2013 was almost three times higher than that of 2006.



The vehicle fleet in Portugal has a bit higher EuroNCAP occupant protection score than the EU average.

Helmet wearing rate is very high in Portugal; seat-belt wearing rates are also higher than the EU average.

#### **Vehicles**

Table 17: State of the vehicle fleet in Portugal compared to the EU average

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Vehicles	EU average
Cars per age group (2012) [1]:	Passenger cars (2012)
- ≤2 years: 6%	≤2 years: 9%
- 3 to 5 years: 15%	3 to 5 years: 13%
- 6 to 10 years: 23%	6 to 10 years: 28%
- >10 years: 57%	>10 years: 49%
EuroNCAP occupant protection score of cars	
(new cars sold in 2013) [2]:	
- 5 stars: 54,2%	5 stars: 52,5%
- 4 stars: 3,5%	4 stars: 4,5%
- 3 stars: 2,7%	3 stars: 2,9%
- 2 stars: 0,4%	2 stars 0,5%
- not tested: 39,1%	not tested: 39,6% <sup>3</sup>

Source: [1] EUROSTAT, 2015; [2] ETSC, 2016

#### **Protective systems**

Table 18: Protective system use in Portugal versus the average in EU

Protective systems	EU average <sup>4</sup>
Daytime seat-belt wearing in cars and vans	(2015)
(2013) [1]:	(2013)
- 96% front	89,7% front
- no information on % driver	not available
- no information on % front passenger	not available
- 77% rear	69,5% rear
- 94% child restraint systems	not available
Helmet use (2010) [2]:	
- 94% motorcycle drivers	
- 94% motorcycle passengers	not available
- no information on % cyclists	
Sources: [1] IRTAD, 2016; [2] WHO, 2013	

<sup>&</sup>lt;sup>3</sup> Based on data of 25 EU countries (excl. HR, LU and MT).

 $<sup>^4</sup>$  Based on data of 15 EU countries; data of AT, BE, IE, IT, LU, HU, FI, SE (2015); data of CZ, DE, DK, HR, LT, PL, UK (2014); data of PT (2013)

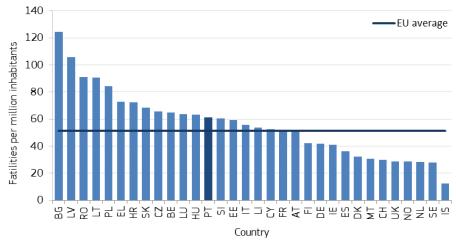


## **Road Safety Outcomes**

## **General positioning**

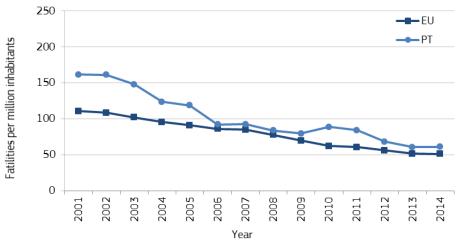
The fatality rate of Portugal is higher than the EU average (around 61 fatalities per million population in 2014). The Portuguese fatality rate and the EU average rate have shown similar developments from 2006 to 2009 and from 2012 to 2014.

Figure 1: Fatalities per million inhabitants in 2014 with EU average



Sources: CARE, Eurostat

Figure 2: Development of fatalities per million inhabitants between 2001 and 2014 for Portugal and the EU average



Sources: CARE, Eurostat

The fatality rate of Portugal is higher than the EU average. The Portuguese fatality rate and the EU average rate have shown similar developments from 2006 to 2009 and from 2012 to 2014.



The shares of moped, lorry and truck occupant fatalities are higher than the EU average.

Transport mode

The shares of moped, lorry and truck occupant fatalities are higher than the EU average. While the average annual reduction of cyclist fatalities between 2001 and 2014 was only 3%, it was 8% for car occupants. In the same period, the annual reduction rates of pedestrian and motorcyclist fatalities were 6% and 7% respectively.

Table 19: Reported fatalities by mode of road transport in Portugal

compared to the EU average

Transport mode	2001	2014	Average annual change	Share in 2014	EU average (2014)
Pedestrians	337	145	-6%	23%	22%
Car occupants	636	223	-8%	35%	45%
Motorcyclists	229	91	-7%	14%	15%
Mopeds	184	43	-11%	7%	3%
Cyclists	50	35	-3%	5%	8%
Bus/coach occupants	29	2	-18%	0%	1%
Lorries or truck occupants	166	57	-8%	9%	5%

Sources: CARE, national sources

## Age, gender and nationality

Table 20: Reported fatalities by age, gender and nationality in Portugal

versus the EU average

versus the EU avei	aye						
Age and gender	2001	2014	Average annual change	Share in 2014	EU average (2014)		
Females							
0 - 14 years	23	3	-14%	0%	1%		
15 - 17 years	13	3	-10%	0%	1%		
18 - 24 years	55	11	-12%	2%	3%		
25 – 49 years	98	28	-9%	4%	6%		
50 - 64 years	64	28	-6%	4%	4%		
65+ years	103	61	-4%	10%	9%		
Males							
0 - 14 years	33	5	-14%	1%	1%		
15 – 17 years	42	8	-12%	1%	2%		
18 - 24 years	274	42	-13%	7%	12%		
25 – 49 years	528	187	-8%	29%	29%		
50 - 64 years	178	116	-3%	18%	15%		
65+ years	218	144	-3%	23%	16%		
Nationality of driver or rider killed							
National	n/a	328	n/a	51%	n/a		
Non-national	n/a	310	n/a	49%	n/a		

Sources: CARE, national sources

Portugal has a somewhat higher share of male road fatalities than the EU average.
Half of the all fatalities are non-nationals.



#### Location

Fatalities in built-up areas are over-represented in Portugal compared to the EU average.

Table 21: Reported fatalities by location in Portugal compared to the EU average

Location	2001	2014	Average annual change	Share in 2014	EU average (2014)
Built-up areas	720	347	-5%	54%	38%
Rural areas	839	241	-9%	38%	54%
Motorways	112	50	-6%	8%	7%
Junctions	236	111	-6%	17%	19%

Sources: CARE, national sources

Fatalities in built-up areas are over-represented in Portugal.

## Lighting and weather conditions

Table 22: Reported fatalities by lighting and weather conditions in Portugal

compared to the EU average

Conditions	2001	2014	Average annual change	Share in 2014	EU average (2014)
Lightning conditions					
During daylight	925	400	-6%	63%	49%
During night-time	743	201	-10%	32%	30%
Weather conditions					
While raining	275	113	-7%	18%	9%

Sources CARE, national sources

## Single vehicle accidents

Table 23: Reported fatalities by type in Portugal compared to the EU average

Accident Type	2001	2014	Average annual change	Share in 2014	EU average (2014)
Single vehicle	580	237	-7%	37%	28%

Sources: CARE, national sources

## **Under-reporting of casualties**

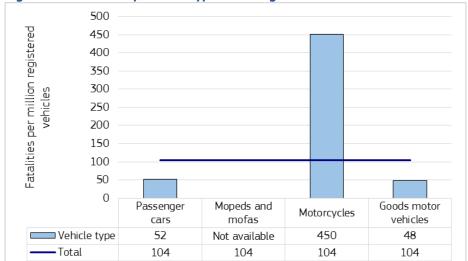
- Fatalities: 100%, due to improvements of the data recording systems.
- Hospitalised: no studies with quantitative information exist.

The share of fatal single vehicle accidents in Portugal is higher than the EU average.



## **Risk Figures**

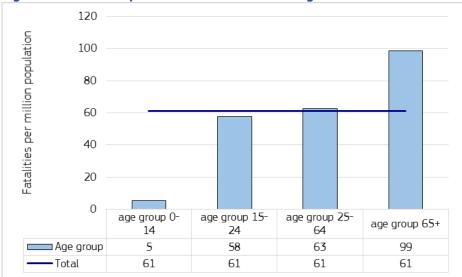
Figure 3: Fatalities by vehicle type in Portugal in 2014



Sources CARE, IRTAD; Number of registered mopeds and mofas was not available, Total = all motor vehicles excluding mopeds and mofas

In Portugal, risk is high for motorcyclists and the elderly.

Figure 4: Fatalities by million inhabitants in Portugal in 2014



Sources: CARE, EUROSTAT



#### **Social Cost**

- The total cost of road accident casualties (fatalities and injuries) is estimated at 48,5 billion euros (2014).
- The following costs are an update of the values in Table 5.3 of the HEATCO Deliverable D5 (2006) to base year 2010. Each figure includes the value of safety per se (VSL<sup>5</sup> for fatality, 13% of VSL for severe, 1% for light injury) and the value of direct and indirect economic costs (10% of VSL for fatality, severe and slight injury based on HEATCO (2005)). EU average based on the VSL of €1,7 million.
- The costs per casualty for 2010 are as follows:

Table 24: Cost (€) per injury type in Portugal versus the EU average

Table 24. Cost (e) per injury type in Fortugat versus the Eo average					
Country	Fatality	Severe injury	Slight injury		
Austria	2.395.000	327.000	25.800		
Belgium	2.178.000	330.400	21.300		
Bulgaria	984.000	127.900	9.800		
Croatia	1.333.000	173.300	13.300		
Cyprus	1.234.000	163.100	11.900		
Czech Republic	1.446.000	194.300	14.100		
Denmark	2.364.000	292.600	22.900		
Estonia	1.163.000	155.800	11.200		
Finland	2.213.000	294.300	22.000		
France	2.070.000	289.200	21.600		
Germany	2.220.000	307.100	24.800		
Greece	1.518.000	198.400	15.100		
Hungary	1.225.000	164.400	11.900		
Ireland	2.412.000	305.600	23.300		
Italy	1.916.000	246.200	18.800		
Latvia	1.034.000	140.000	10.000		
Lithuania	1.061.000	144.900	10.500		
Luxembourg	3.323.000	517.700	31.200		
Malta	2.122.000	269.500	20.100		
Netherlands	2.388.000	316.400	25.500		
Poland	1.168.000	156.700	11.300		
Portugal	1.505.000	201.100	13.800		
Romania	1.048.000	136.200	10.400		
Slovakia	1.593.000	219.700	15.700		
Slovenia	1.989.000	258.300	18.900		
Spain	1.913.000	237.800	17.900		
Sweden	2.240.000	328.700	23.500		
Great Britain	2.170.000	280.300	22.200		
EU average	1.870.000	243.100	18.700		

Source: Update of the Handbook on External Costs of Transport. Final Report. Report for the European Commission: DG MOVE. Ricardo-AEA/R/ ED57769 Issue Number 1; 8th January 2014

The estimated costs for road accident casualties are lower in Portugal than on average in the EU.

<sup>&</sup>lt;sup>5</sup> Value of Statistical Life



## **Synthesis**

## Safety position

- The fatality rate of Portugal is higher than the EU average (around 61 fatalities per million population in 2014).

#### Scope of problem

- In Portugal, relative many moped riders and truck occupants died in road accidents compared to the EU average.
- Portugal has a somewhat higher share of male road fatalities than the EU average.
- Fatalities in built-up areas, during daylight and while raining are over-represented in Portugal.
- The number of speed tickets per population in Portugal is much lower than the EU average.

**Recent progress** 

- The Portuguese fatality rate and the EU average rate have shown similar developments from 2006 to 2009 and from 2012 to 2014.
- The percentage of speed offenders in Portugal has decreased on motorways between 2001 and 2004.
- The amount of alcohol tests per population in 2013 was almost three times higher than that of 2006.

## Remarkable road safety policy issues

- The new National Road Safety Strategy, "PENSE 2016-2020" is being developed.
- High risk site treatment is obligatory in Portugal.
- Effectiveness of enforcement in Portugal is at the level of most EU countries.
- Helmet wearing rate is very high in Portugal; seat-belt wearing rates are also higher than the EU average.
- Mandatory inspection periods in Portugal are somewhat shorter for older buses/coaches and lorries/trucks than the most common periods in the EU.

The new National Road Safety Strategy, "PENSE 2016-2020" is being developed.



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#### Notes

#### 1. Country abbreviations

	Belgium	BE		Italy	IT		Romania	RO
	Bulgaria	BG	200	Cyprus	CY	-	Slovenia	SI
	Czech Republic	CZ		Latvia	LV	#	Slovakia	SK
	Denmark	DK		Lithuania	LT		Finland	FI
	Germany	DE		Luxembourg	LU	+	Sweden	SE
	Estonia	EE		Hungary	HU		United Kingdom	UK
	Ireland	ΙE	+	Malta	MT			
	Greece	EL		Netherlands	NL	+	Iceland	IS
*	Spain	ES		Austria	AT	松	Liechtenstein	LI
	France	FR		Poland	PL	+	Norway	NO
***	Croatia	HR	(*)	Portugal	PT	+	Switzerland	СН

2. Sources: CARE (Community database on road accidents), EUROSTAT, ITF-IRTAD, National sources.

The full glossary of definitions of variables used in this Report is available at: <a href="http://ec.europa.eu/transport/road/safety/pdf/statistics/cadas/glossary.pdf">http://ec.europa.eu/transport/road/safety/pdf/statistics/cadas/glossary.pdf</a>

- 3. Data available in September 2016.
- 4. Average annual change is calculated with the power function between the first and last years:

[aac =  $(b/a)^{1/n}$ -1, where aac: annual average change, a: first year value, b: last year value, n: number of years].

5. Explanation of symbols in Tables:

n/a: not available

- "-": not applicable (e.g. calculation cannot be performed)
- 6. This 2016 edition of Road Safety Country Overviews updates the previous version produced in 2012 within the EU co-funded research project <u>DaCoTA</u>.

#### 7. Disclaimer

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8. Please refer to this Report as follows:

European Commission, Road Safety Country Overview - Portugal, European Commission, Directorate General for Transport, September 2016.



