



Road Safety Country Overview





Structure and Culture

Basic Data

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

Basic data of Bulgaria	EU average
- Population: 7,154 million inhabitants (2015)[2]	18,2 million (2016)
- Area: 111.002 km ² (2015)[2]	159.678 km ² (2015)
(2,16% water) (2015)[4]	2,94% water (2015)
- Climate and weather conditions (capital city; 2015) [3]:	(2015)
 Average winter temperature (Nov. to April): 3,9°C 	5,1°C
 Average summer temperature (May to Oct.): 14,6°C 	16,6°C
- Annual precipitation level: 581,8 mm	691,5 mm
- Exposure: 23.000 million vehicles km (2014) [2]	168.260 million vehicle km (2015)
- 0,57 vehicles per person (2015) [2]	0,57 (2015)
Sources: [1] IRTAD; [2] EUROSTAT; [3] national sources; [4] CIA	

In Bulgaria, the GDP per capita and the number of vehicles per person are lower than in the EU on average.

Country characteristics

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

(Characteristics of Bulgaria	EU average
	Population density: 66,2 inhabitants/km ² (2015)	114 inhabitants/km ²
	[2]	(2015)
	Population composition (2015) [2]	
	13,9% children (0-14 years)	15,6% children
	66,1% adults (15-64 years)	65,6% adults
	20,0% elderly (65 years and over)	18,9% elderly (2015)
	- Gross Domestic Product (GDP) per capita:	
	€6.330 (2015) [2]	€27.198 (2015)
	- 74,6% of population lives inside urban area	72,6% (2015)
	(2016)[4]	
	- Special characteristics [4]: mostly mountains	
	with lowlands in north and southeast	
So	urces: [1] IRTAD; [2] EUROSTAT; [3] national sources; [4] CIA	



Structure of road safety management

In Bulgaria policy making is centralised while the implementation is decentralised. Bulgaria's action plan "National strategy for improving the safety of road for 2011-2020" is proposed by the State Public Consultative Committee of Road Safety.

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

Table 3: Key actors per function in Bulgaria					
Key functions	Key actors				
1 Formulation of national RS strategy - Setting targets - Development of the RS programme	 Ministry of Transportation, Information Technologies and Communications (MTITC) Ministry of Interior (MoI) Ministry of Regional Development and Public Works (MRDPW) Ministry of Education, Youth and Science (MEYS) Ministry of Agriculture and Forestry (MAF) State Public Consultative Committee of Road Safety consisting of ministries, a secretary and 16 members Regional road safety commissions 				
2. Monitoring of the RS development in the country	 Mol Other ministries whose deputy ministers are members of the State public consultative committee of road safety State public consultative committee of road safety 				
3. Improvements in road	- MTITC				
infrastructure 4. Vehicle improvement	- MRDPW - MTITC - Mol - MAF - Ministry of Defence (MoD)				
5. Improvement in road user education	- MEYS - MoI - MTITC - non-government organisations (NGOs)				
6. Publicity campaigns	 MoI MEYS MTITC State Public Consultative Committee of Road Safety Non Governmental Organisations (NGOs) media 				
7. Enforcement of road traffic laws	- MoI - MTITC - MRDPW - MEYS - Ministry of Economy, Energy and Tourism(MEET) - MoD				
8. Other relevant actors	 the National Road Infrastructure Fund (RIF); Ministries: Ministry of Health and Treatment and Rescue and Relief MRDPW Insurance companies; Municipalities Consulting engineers, construction companies industry 				

10 out of 28 regions have a road safety commission.



- non-government organisations (NGOs)
- Research: University of Architecture and Civil Engineering, and the Institute of the Ministry of Interior

Source: DG-MOVE

Attitudes towards risk taking

As Bulgaria is not part of the ESRA survey, there is no information on attitudes that is comparable to other European countries.



Bulgaria follows the strategy of road safety as a shared responsibility.

Programmes and measures

Road safety strategy of the country

- Under the title `Road safety is everybody's right and responsibility', the strategy foresees the participation of public institutions, regional and municipal authorities, non-governmental organisations, the private sector and civil society. It targets relations and circumstances at community level that have an adverse effect on traffic safety.

National strategic plans and targets

• Targets (referred to 2010):

Table 4: Road safety targets for Bulgaria

Year	Fatalities	Serious injuries
2020	-50%	-20%
	max. 388	max. 6.363

- Priority topics:
 - Road safety management
 - Education & awareness raising
 - Enforcement
 - Infrastructure: self-explaining & forgiving roads
 - Safety of vehicle fleet
 - E-Safety
- Trauma care

(Source: national sources)

Road infrastructure

Table 5: Description of the road categories and their characteristics in Bulgaria

- angui iu	
Road type	General speed limits for passenger cars(km/h)
Urban roads	50
Rural roads	90
Motorways	120/140

Source: EC DG-Move, 2017

- Special rules for: no information available
- Guidelines and strategic plans for infrastructure are available in Bulgaria.



High risk site treatment, road safety audits and inspections are obligatory in Bulgaria.

Bulgaria has a zero tolerance of drink-driving for all drivers.

Table 6: Obligatory parts of infrastructure management in Bulgaria and other EU countries

Obligatory parts in Bulgaria:	EU countries with obligation
Safety impact assessment: -	32%
Road safety audits: yes	81%
Road safety inspections: yes	89%
High risk site treatment: yes	74%

Sources: [1] DG-TREN, 2010; [2] national sources

- Recent infrastructural actions:
- Alternate merging is mandatory in case of congestion
- Eight new signs were added to the Code (for cycling traffic)
- Cycle roads were created in February 2012 on which cyclists have priority

Traffic laws and regulations

Table 7: Description of the regulations in Bulgaria in relation to the most common regulations in other EU countries

Regulations in Bulgaria [1]	Most common in EU (% of countries)
Allowed BAC ¹ levels:	
General population: 0,0%Novice drivers: 0,0%Professional drivers: 0,0%	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:	
Driver: obligatoryFront passenger: obligatoryRear passengers: obligatoryChildren: obligatory	Obligatory (all countries) Obligatory (all countries) Obligatory (all countries) Obligatory (all countries)
Helmet wearing:	
Motor riders: ObligatoryMoped riders: ObligatoryCyclists: not obligatory	Obligatory (all countries) Obligatory (all countries) Not obligatory (46%)
 Daytime running lights are mandatory. A demerit point system is in place. [2] 	

Sources: [1] EC DG-Move, 2017; [2] WHO, 2013

¹ Blood Alcohol Concentration



The effectiveness of child restraint and drink-driving law enforcement is assessed as quite low compared to the EU average.

In Bulgaria, road safety education is available at primary and secondary school.

Enforcement

Table 8: Effectiveness of enforcement effort in Bulgaria according to an international respondent consensus (scale = 0-10)

Issue	Score for Bulgaria	Most common in EU (% of countries)
Speed legislation enforcement	7	7 (43%)
Seat-belt law enforcement	7	7 (25%) and 8 (25%)
Child restraint law enforcement	5	8 (39%)
Helmet legislation enforcement	8	9 (50%)
Drink-driving law enforcement	6	8 (43%)

Source: WHO, 2015

Road User Education and Training

Table 9: Road user education and training in Bulgaria compared to the situation in other EU countries

Most common in EU (% of countries)
Compulsory (71%) Compulsory (43%)
18 years (82%) 16 years for low categories (68%) and 18 years for higher categories (64%) 21 years (89%) 21 years (71%)

Public Campaigns

Table 10: Public campaigns in Bulgaria compared to the situation in other EU countries

Campaigns in Bulgaria	Most common issues in EU (% of countries)
Organisation:	
- The National Road Safety Commission (NRSC)	
Main themes:	
Drink-drivingSeat beltSpeedingSchool start & children safetyLight use	Drink-driving (96%) Speeding (86%) Seat-belt (79%)

Sources: ETSC, 2011; IRTAD, 2014; national sources



Mandatory inspection periods in Bulgaria vary between vehicle types.

Vehicles and technology (national developments)

Table 11: Developments of vehicles and technology in Bulgaria compared to the situation in other EU countries

Mandatory technical inspections:	Most common in EU (% of countries)	
Passenger cars: every 12 months	Every 12 months (39%)	
Motorcycles: every 24 months	Every 24 months (32%)	
Buses or coaches: every 6 months	Every 12 months (61%)	
Lorries or trucks: every 6 months	Every 12 months (68%)	

Sources: EC website, national sources



The number of speed tickets per population was much lower than the EU average in 2008.

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Road Safety Performance Indicators

Speed

Table 13: Number of speed tickets per population in Bulgaria compared to the EU average

Measure	2007	2008	Average annual change	EU average (2008)
Number of speed tickets/ 1.000 population	18	20	11%	84

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

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

Road type	2004	2013	Average annual change	EU average
Motorways	n/a	n/a	-	n/a
Rural roads	n/a	n/a	-	n/a
Urban roads	n/a	n/a	-	n/a

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

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

Road type	2004	2013	Average annual change	EU average
Motorways	n/a	n/a	-	n/a
Rural roads	n/a	n/a	-	n/a
Urban roads	n/a	n/a	-	n/a

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

Alcohol

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

Measure	2006	2015	Average annual change	EU average (2015)
Amount of tests/1.000 population	n/a	n/a	-	209
% tested over the limit	n/a	n/a	-	2,2%

Sources: ETSC, 2016

No known road side surveys on drink driving exist in Bulgaria.



EuroNCAP scores in Bulgaria are lower than the EU average.

Seat-belt wearing rates in Bulgaria are much lower than the EU average.

Vehicles

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

	,
Vehicles	EU average
Cars per age group (2008) [1]:	Passenger cars (2008)
≤ 5 years: 8% 6 to 10 years: 10% > 10 years: 82%	2 years: 9%3 to 5 years: 16%6 to 10 years: 24%>10 years: 43%
EuroNCAP occupant protection score of cars (new cars sold in 2013) [2]:	
- 5 stars: 50% - 4 stars: 4,2% - 3 stars: 4,2%	5 stars: 52,5% 4 stars: 4,5% 3 stars: 2,9%
- 2 stars: 0,0% - not tested: 41,3%	2 stars: 0,5% not tested: 39,6% ²

Sources: [1] Eurostat; [2] ETSC, 2016

Protective systems

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

Protective systems	EU average ³
Daytime seat-belt wearing in cars and vans (2010) [1]:	(2016)
- 85% front	not available
- no information on % driver	91,6% driver
- no information on % passenger	92,4% front passenger
- 30% rear	70,9% rear
- no information on % child restraints	not available
Helmet use (2010) [2]:	
80% motorcycle drivers30% motorcycle passengers	not available

Sources: [1] WHO, 2013; [2] WHO, 2015

² Based on data of 25 EU countries (excl. HR, LU and MT).

³ Based on data of 17 EU countries; data of AT, DE, IE, IT, LT, FI, SE (2016); data of BE, CZ, HU, LU, PL, SI (2015); data of DK, HR, UK (2014); data of PT (2013)

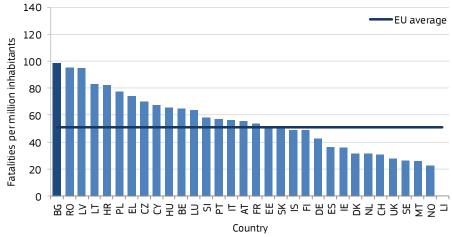


Road Safety Outcomes

General positioning

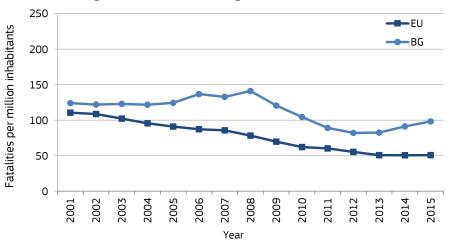
The fatality rate of Bulgaria is substantially higher than the EU average (around 98 fatalities per million population in 2015). After increases between 2004 and 2008, fatality rate was decreasing since 2009 and rose again in 2013.

Figure 1: Fatalities per million inhabitants in 2015 with EU average



Sources: CARE, Eurostat

Figure 2: Development of fatalities per million inhabitants between 2001 and 2015 for Bulgaria and the EU average



Sources: CARE, Eurostat

The fatality rate of Bulgaria is substantially higher than the EU average; it was decreasing since 2009 and rose again in 2013.



The share of car occupant fatalities is much higher than the EU average.

Transport mode

The share of car occupant fatalities is much higher than the EU average. While the average annual reduction of motorcyclist fatalities between 2008 and 2009 was 4%, it was 7% for mopeds. In the same period, the annual reduction rates of pedestrian and cyclist fatalities were 4% and 2%.

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

compared to the EU average

Transport mode	2008	2009	Average annual change	Share in 2009	EU average (2009)
Pedestrians	278	198	-4%	22%	20%
Car occupants	623	570	-1%	63%	48%
Motorcyclists	67	48	-4%	5%	15%
Mopeds	9	5	-7%	1%	4%
Cyclists	35	29	-2%	3%	7%
Bus/coach occupants	5	5	0%	1%	0%
Lorries or truck occupants	28	33	2%	4%	5%

Sources: CARE, national sources

Age, gender and nationality

Table 20: Reported fatalities by age, gender and nationality in Bulgaria versus the EU average

Age and gender	2008	2009	Average annual change	Share in 2009	EU average (2009)
Females					
0-14 years	15	8	-47%	1%	1%
15 – 17 years	11	6	-45%	1%	1%
18 – 24 years	40	28	-30%	3%	3%
25 – 49 years	60	67	12%	7%	7%
50 – 64 years	40	29	-28%	3%	4%
65+ years	65	63	-3%	7%	8%
Males					
0-14 years	19	22	16%	2%	2%
15 – 17 years	20	27	35%	3%	2%
18 – 24 years	142	129	-9%	14%	14%
25 – 49 years	345	301	-13%	33%	31%
50 – 64 years	134	126	-6%	14%	13%
65+ years	128	95	-26%	11%	13%
Nationality of kill	led person				
National	995	836	-16%	93%	n/a
Non-national	66	65	-2%	7%	n/a

Sources: CARE, national sources

Bulgaria has a similar share of road fatalities by age and gender compared to the EU average.



Location

Fatalities in rural areas are over-represented in Bulgaria compared to the EU average.

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

average					
Location	2008	2009	Average annual change	Share in 2009	EU average (2009)
Built-up areas	447	312	-30%	35%	38%
Rural areas	576	553	-4%	61%	54%
Motorways	38	36	-5%	4%	7 %
Junctions	167	119	-29%	13%	24%

Sources: CARE, national sources

Fatalities in rural areas are over-represented in Bulgaria.

Lighting and weather conditions

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

compared to the EU average

Conditions	2008	2009	Average annual change	Share in 2009	EU average (2009)
Lightning conditions					
During daylight	566	531	-6%	59%	48%
During night-time	447	333	-26%	37%	33%
Weather conditions					
While raining	66	87	32%	10%	10%

Sources CARE, national sources

Single vehicle accidents

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

Accident Type	2008	2009	Average annual change	Share in 2009	EU average (2009)
Single vehicle	380	357	-6%	40%	27%

Sources: CARE, national sources

Under-reporting of casualties

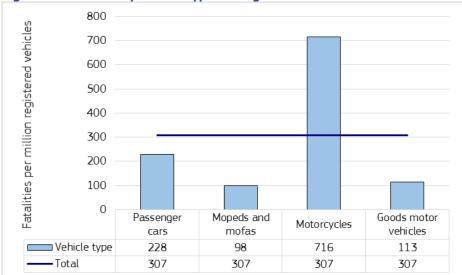
- Fatalities: 100%, due to improvements of the data recording systems.
- Hospitalised: no studies with quantitative information exist.

The proportion of fatal single vehicle accidents is substantially higher than the EU average.



Risk Figures

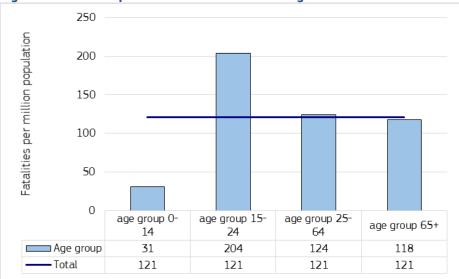
Figure 3: Fatalities by vehicle type in Bulgaria in 2009



Sources CARE, UNECE

In Bulgaria motorcyclists and youngsters have a higher risk of getting involved in a fatal crash compared to the other groups.

Figure 4: Fatalities per million inhabitants in Bulgaria in 2009



Sources: CARE, EUROSTAT



Costs per injury type are estimated to be almost the half compared to the EU average.

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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 (VSL⁴ 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 Bulgaria versus the EU average

Table 24. Cost (e) per injury type in bulgaria 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 Europea						

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

Commission: DG

⁴ Value of Statistical Life



Synthesis

Safety position

- With 98 road fatalities per million population in 2015, Bulgaria has the highest mortality rate in the EU.

Scope of problem

- The major share of the fatalities are car occupants, which is even higher than the EU average.
- The pedestrians also form a large portion of the victims (22%), while all other types of road users only represent a small portion of the registered fatalities.
- In Bulgaria motorcyclists and youngsters have a higher risk of getting involved in a fatal accident compared to the other groups.
- Most fatal accidents even more than the EU average happen on rural roads in Bulgaria.

Recent progress

- After increases between 2004 and 2008, the Bulgarian road fatality rate was decreasing up to 2013, since when an increasing trend was recorded again.
- A substantial decrease in fatalities was recorded between 2008 and 2009, especially in built up areas and at junctions.

Remarkable road safety policy issues

- Since 2011, Bulgaria follows the strategy of road safety as a shared responsibility. It targets relations and circumstances at community level that have an adverse effect on traffic safety.
- High risk site treatment, road safety inspections and audits are obligatory in Bulgaria.
- The effectiveness of child restraint law enforcement is assessed as quite low compared to the EU average, while enforcement of other issues is more or less at the same level.
- Seat-belt wearing rates in Bulgaria are much lower than the EU average.
- Bulgaria has a zero tolerance of drink-driving for all drivers, however, no known road surveys on drink-driving exist in the country.
- Bulgaria has one of the highest proportions of old cars in the EU and EuroNCAP occupant protection score is lower than the EU average.

Bulgaria has a zero tolerance of drink-driving for all drivers, however, no known road surveys on drink-driving exist in the country.

E R European Road Safety Observatory

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Notes

1. Country abbreviations

	Belgium	BE		Italy	IT		Romania	RO
	Bulgaria	BG	2001	Cyprus	CY	5	Slovenia	SI
	Czech Republic	CZ		Latvia	LV	*	Slovakia	SK
	Denmark	DK		Lithuania	LT	(3)	Finland	FI
	Germany	DE		Luxembourg	LU	+	Sweden	SE
	Estonia	EE		Hungary	HU		United Kingdom	UK
	Ireland	ΙE	*	Malta	MT			
I	Greece	EL		Netherlands	NL	╁	Iceland	IS
*	Spain	ES		Austria	AT	es.	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: http://ec.europa.eu/transport/road/safety/pdf/statistics/cadas/glossary.pdf

- 3. Data available in September 2017.
- 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 2017 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 - Bulgaria, European Commission, Directorate General for Transport, September 2017.



