Critical issues and priority actions for road safety in Europe

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NTUA Road Safety Observatory

- The NTUA Road Safety Observatory (www.nrso.ntua.gr) is a Center of Research and Innovation Excellence on Road Safety, with global recognition [ranked: 4th in Europe and 45th worldwide (PubMed 2023), 2nd in Europe and 6th worldwide (AAP 2019)]
- A Team of 35+ Scientists: internationally recognized Professors, Senior Transportation Engineers, PostDoc, PhD Candidates and other scientists
- An international reference website - information system with state-of-the art road safety data and knowledge:
  - more than 300.000 visits per month,
  - 146 electronic newsletters since 2007,
  - tens of tweets and social media posts annually,
  - network of more than 5.500+ road safety experts in Greece (1.500+) and worldwide (4.000+).
- An excellent research activity:
  - More than 183 Diploma Theses & 25 PhD Theses,
  - More than 178 road safety research projects, mostly highly competitive,
  - More than 901 road safety publications (> 258 in scientific journals),
  - More than 162 scientific committees,
  - International Cooperations: European Commission, UN/ECE, OECD/ITF, WHO, World Bank, EIB, CEDR, FEHRL, ERF, IRF, UITP, ETSC, WCTR, TRB, decades of Universities and Research Centers.

Introduction

- Road crashes is a major societal problem worldwide, with 1,19 million road fatalities per year and more than 50 million of road injuries
- Road traffic injuries are the leading cause of death for children and young adults aged 5-29
- More than half of all road traffic deaths occur among vulnerable road users, such as pedestrians, cyclists and motorcyclists
- Over the last years, Europe has presented a relatively better performance due to the targeted road safety policies, however, the serious non-fatal road crashes still constitute a significant public health issue

Basic Road Fatalities Figures in Europe (2002-2023)

National Technical University of Athens

Road Safety Observatory

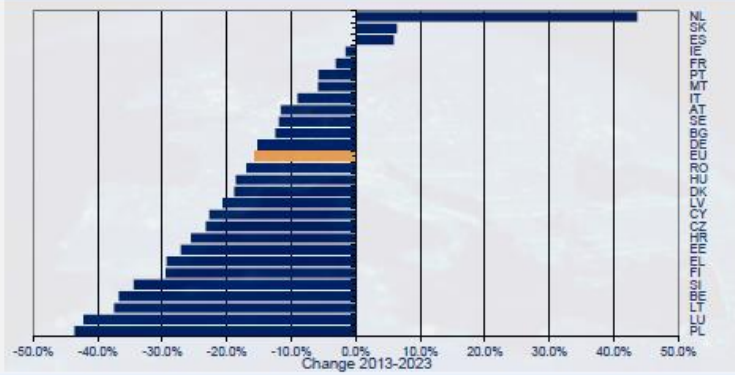
ec1. Basic road fatalities figures, European Union 2002 - 2023

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2013/2023
Austria	956	931	878	768	730	691	679	633	552	523	531	455	430	479	432	414	409	416	344	362	370	402	-11.6%
Belgium	1,306	1,213	1,162	1,089	1,069	1,071	944	944	850	884	827	764	745	762	670	609	604	646	499	516	540	483	-36.8%
Bulgaria	959	960	943	957	1,043	1,006	1,061	901	776	656	601	601	661	708	708	682	610	628	463	561	531	526	-12.5%
Cyprus	94	97	117	102	86	89	82	71	60	71	51	44	45	57	46	53	49	52	48	45	37	34	-22.7%
Czechia	1,430	1,447	1,382	1,286	1,063	1,221	1,076	901	802	773	742	654	688	734	611	577	656	618	518	532	527	502	-23.2%
Germany	6,842	6,613	5,842	5,361	5,091	4,949	4,477	4,152	3,648	4,009	3,600	3,339	3,377	3,459	3,206	3,180	3,275	3,046	2,719	2,562	2,788	2,830	-15.2%
Denmark	463	432	369	331	306	406	406	303	255	220	167	191	182	178	211	175	171	199	163	130	154	155	-18.8%
Estonia	223	164	170	170	204	196	132	98	79	101	87	81	78	67	71	48	67	52	59	55	49	59	-27.2%
Greece	1,634	1,605	1,670	1,658	1,657	1,612	1,553	1,456	1,258	1,141	988	879	795	793	824	731	700	688	584	624	654	621	-29.4%
Spain	5,347	5,400	4,741	4,442	4,104	3,822	3,098	2,714	2,479	2,060	1,902	1,680	1,688	1,689	1,810	1,830	1,806	1,755	1,370	1,533	1,746	1,779	5.9%
Finland	415	379	375	379	336	380	344	279	272	292	255	258	229	270	258	238	239	211	223	225	196	182	-29.5%
France	7,655	6,058	5,530	5,318	4,709	4,620	4,275	4,273	3,992	3,963	3,653	3,268	3,380	3,459	3,471	3,444	3,246	3,237	2,538	2,931	3,260	3,167	-3.1%
Croatia	627	701	608	597	614	619	664	548	426	418	393	368	308	348	307	331	317	297	237	292	275	274	-25.5%
Hungary	1,429	1,326	1,296	1,278	1,303	1,232	996	822	740	638	605	591	626	644	607	625	633	602	460	544	537	481	-18.6%
Ireland	378	337	377	400	365	338	280	238	212	186	163	188	192	162	182	154	135	140	146	137	155	185	-1.6%
Italy	6,980	6,563	6,122	5,818	5,669	5,131	4,725	4,237	4,114	3,860	3,753	3,401	3,381	3,428	3,283	3,378	3,334	3,173	2,395	2,875	3,159	3,094	-9.0%
Lithuania	697	709	752	773	760	740	499	370	299	296	302	256	267	242	188	191	173	186	175	148	120	160	-37.5%
Luxembourg	62	53	50	47	43	46	35	48	32	33	34	45	35	36	32	25	36	22	26	24	36	26	-42.2%
Latvia	559	532	516	442	407	419	316	254	218	179	177	179	212	188	158	136	148	132	139	147	113	142	-20.7%
Malta	16	16	13	17	11	12	9	15	13	16	9	17	10	11	23	19	18	16	12	9	26	16	-5.9%
Netherlands	987	1,028	804	750	730	709	677	644	537	546	562	476	476	531	533	535	598	586	515	509	655	684	43.7%
Poland	5,826	5,642	5,712	5,444	5,243	5,583	5,437	4,572	3,908	4,189	3,571	3,357	3,202	2,938	3,026	2,831	2,862	2,909	2,491	2,245	1,896	1,893	-43.6%
Portugal	1,675	1,546	1,294	1,247	969	974	885	840	937	891	718	637	638	593	563	602	700	688	536	561	618	600	-5.8%
Romania	2,411	2,229	2,442	2,629	2,587	2,800	3,065	2,796	2,377	2,018	2,042	1,861	1,818	1,893	1,913	1,951	1,867	1,864	1,644	1,779	1,633	1,545	-17.0%
Sweden	560	529	480	440	445	471	397	358	266	319	285	260	270	259	270	253	324	221	204	210	227	229	-11.9%
Slovenia	269	242	274	258	262	293	214	171	138	141	130	125	108	120	130	104	91	102	80	114	85	82	-34.4%
Slovakia	625	653	608	606	614	661	606	384	371	325	352	251	295	310	275	276	260	270	247	247	266	267	6.4%
European Union	50,425	47,404	44,527	42,607	40,420	40,091	36,932	33,022	29,611	28,748	26,500	24,226	24,136	24,358	23,808	23,392	23,328	22,756	18,835	19,917	20,653	20,418	-15.7%

Road fatalities have decreased by 16% during the period 2013-2023, leading to 3,808 less road fatalities (2023) in comparison to 2013.

Five countries (BE, LT, LU, PL, SI) have reached reduction of more than 30% for the period 2013-2023.

Since 2013, Poland has recorded the best road fatalities reduction progress among all EU countries.



Notes: Figures in italics are based on provisional data

Issued: July 26th, 2024

About the data: nrso-data-gr

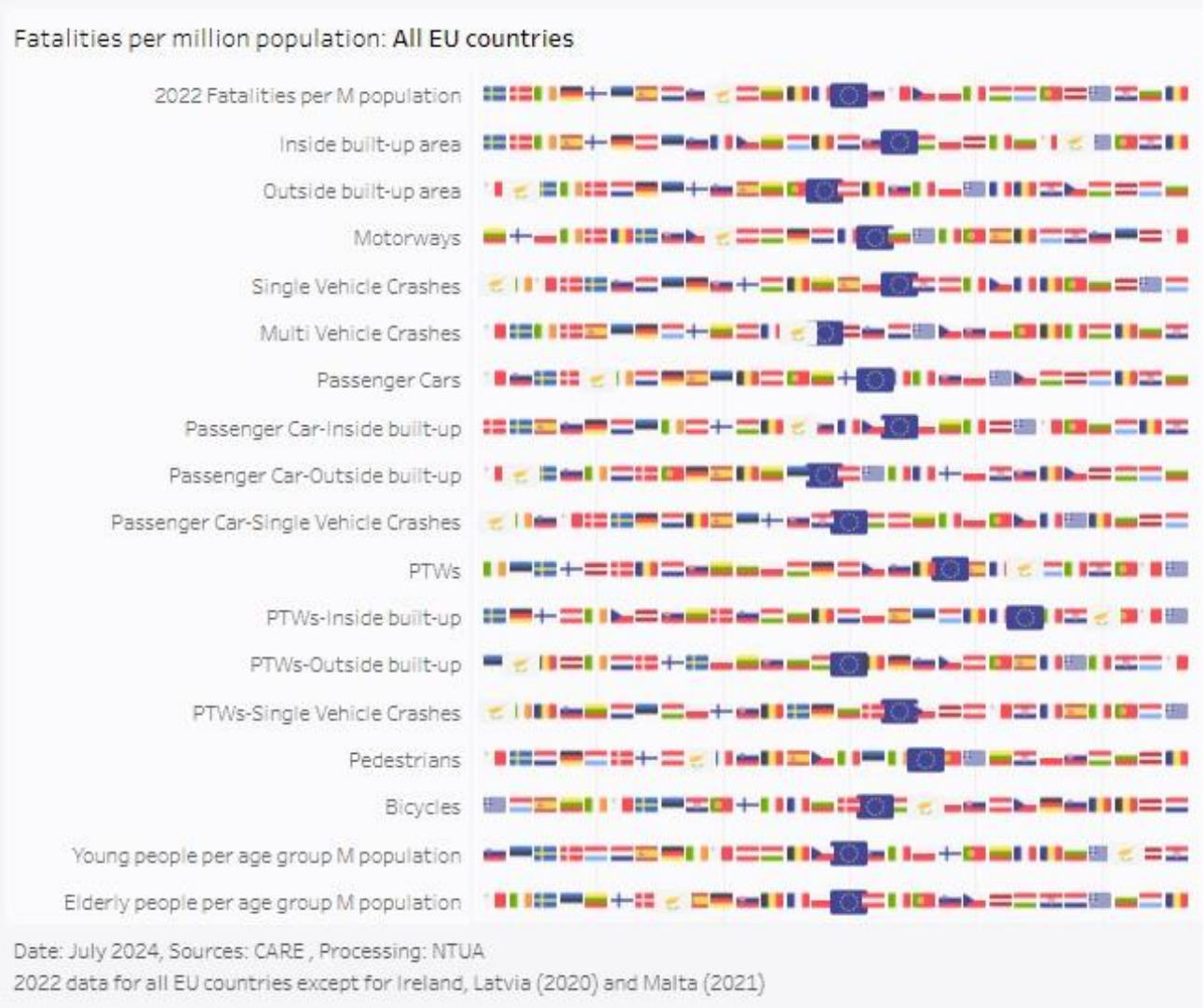
Sources: CARE Database

ETSC

Source: CARE, Data Processing: NTUA, https://www.nrso.ntua.gr/slight-decrease-in-road-fatalities-in-2023-europe/

Fatalities by Road Crash Type in Europe (2022)

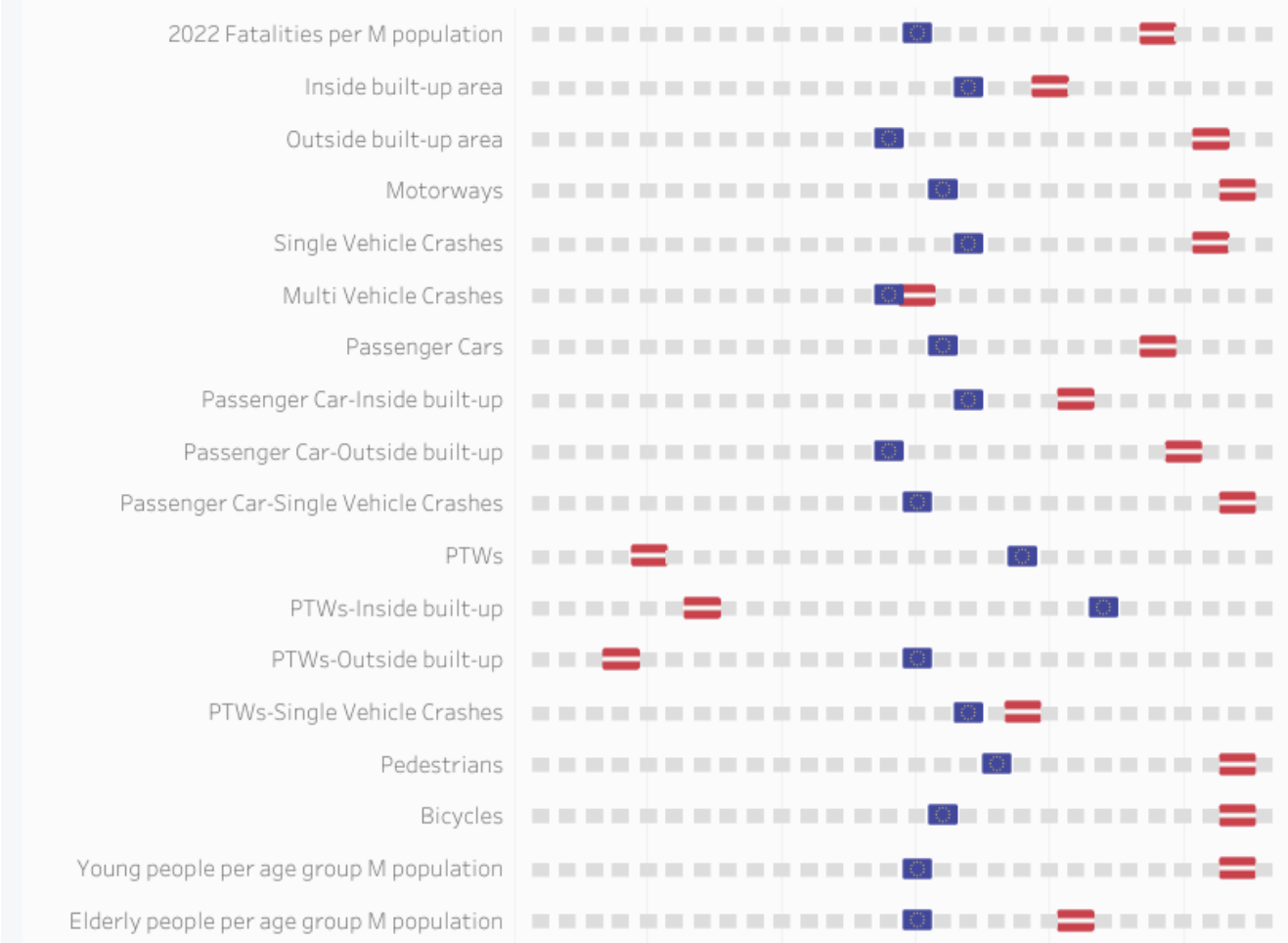
The new EU road fatalities interactive infographic of the [NTUA Road Safety Observatory](), based on European Commission CARE data for 2022, allows for performance comparisons for different types of road crashes



Source: CARE, Data Processing: NTUA
https://www.nrso.ntua.gr/nrso-ec2/

Fatalities by Road Crash Type in Latvia (2022)

- In 2022, Latvia had the fifth highest mortality rate in the EU (60 fatalities per million inhabitants vs the EU average of 46)
- When compared to the EU average, Latvia has significantly higher proportions of fatalities that occurred on motorways and rural roads
- The distribution of fatalities in Latvia shows a relatively high proportion of pedestrians and bicycles (achieving the second highest mortality rate in the EU)
- On the other hand, the proportion of powered two-wheelers is much smaller than the EU average



Source: CARE, Data Processing: NTUA
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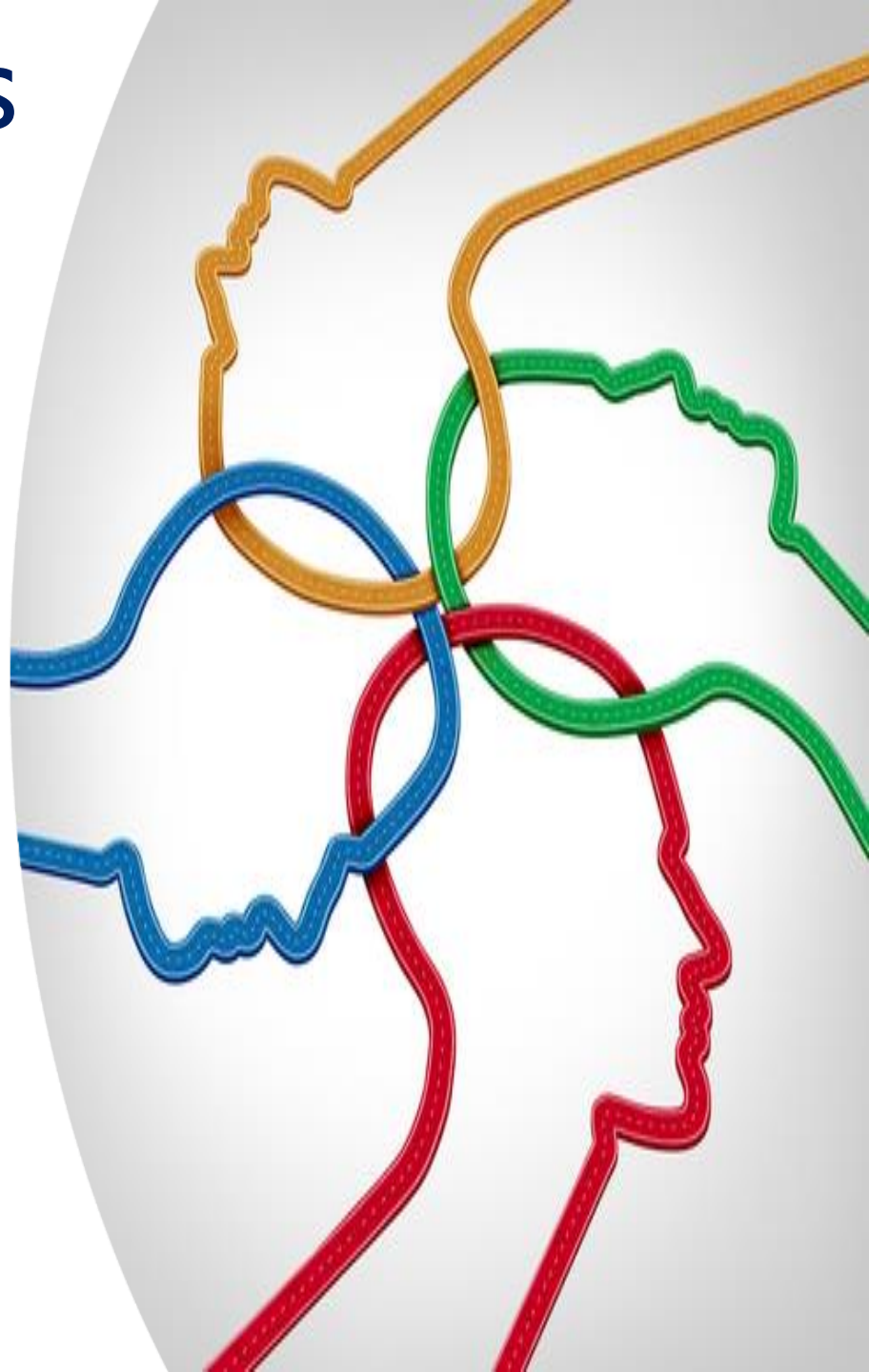
Problems and Causes

- Speeding
- Driving under the influence of alcohol/drugs
- Non-use of seat belt and child restraints
- Non-use of helmets
- Distraction, including the use of mobile phones, leading to impaired driving
- Unsafe vehicles and road infrastructure
- Inadequate post-crash care
- Inadequate enforcement of traffic laws

Evolution of Road Safety Policies

- The 4 E's of Road Safety:
  - ✓ Education
  - ✓ Engineering
  - ✓ Enforcement
  - ✓ Emergency Response
- Qualitative objectives and specific priorities are set, covering the three main factors of road crashes:
  - ✓ Driver behaviour
  - ✓ Road infrastructure
  - ✓ Vehicles
- Long term quantitative targets are set and the need of monitoring the road safety progress by establishing performance indicators and the preparation of a mid term review are highlighted



Priority Actions and Strategies

- Closer cooperation among all road safety actors
- Police enforcement and targeted funding
- Systematic monitoring and evaluation
- Development an effective road infrastructure safety management system
- Redesign of road infrastructure and traffic
- Implementation of an integrated policy to promote safer roads everywhere and for all

Road Safety Policy Perspectives

- Focus on the key road crash risk factors:
  - ✓ Speed, Speed and Speed
  - ✓ Drink and Drive
  - ✓ Distracted Driving
  - ✓ Not use of seat belt and helmet

- Adapt urban mobility management to accommodate and balance current and future mobility and safety needs of the vulnerable road users (pedestrians, cyclists, motorcyclists): **Reduce Speed everywhere**

- Develop strong road safety culture of the Authorities and the Stakeholders (Safe System Approach) as well as the whole population

Conclusions

- Digitalization opens great new data possibilities for road user support and guidance
- The latest technological developments on vehicle safety should be used to avoid road crashes and protect pedestrians and cyclists
- Need for efficient and clear communication messages, beyond scientific pleas
- Collaboration with social culture specialists
- Prioritizing VRUs safety through 30 km/h city-wide speed limits

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