

7th IRTAD Conference
BETTER ROAD SAFETY DATA
FOR BETTER SAFETY OUTCOMES
Lyon, 27-28 September 2022

Collection of Key Performance Indicators for Road Safety in Greece

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Background

- In 2020, Greece recorded 579 fatalities in road crashes, achieving a **54% reduction compared to 2010**. Despite this significant improvement, additional efforts are required in order to further improve road safety performance.
- An important step towards this direction is to better understand the **factors leading to road crashes** and casualties.
- Within this context, the Ministry of Infrastructure and Transport in collaboration with the National Technical University of Athens (NTUA) participated in the **Baseline project**, with aim the data collection and calculation of the following KPIs for road safety in Greece.

**KEY
PERFORMANCE
INDICATOR**



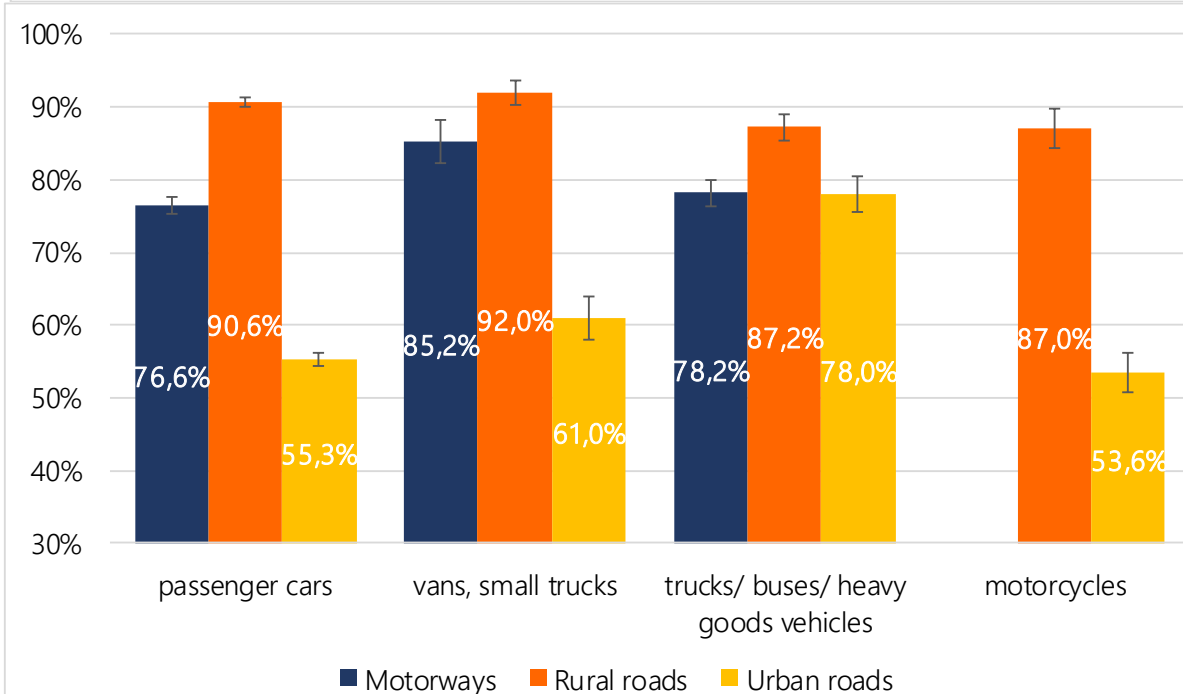
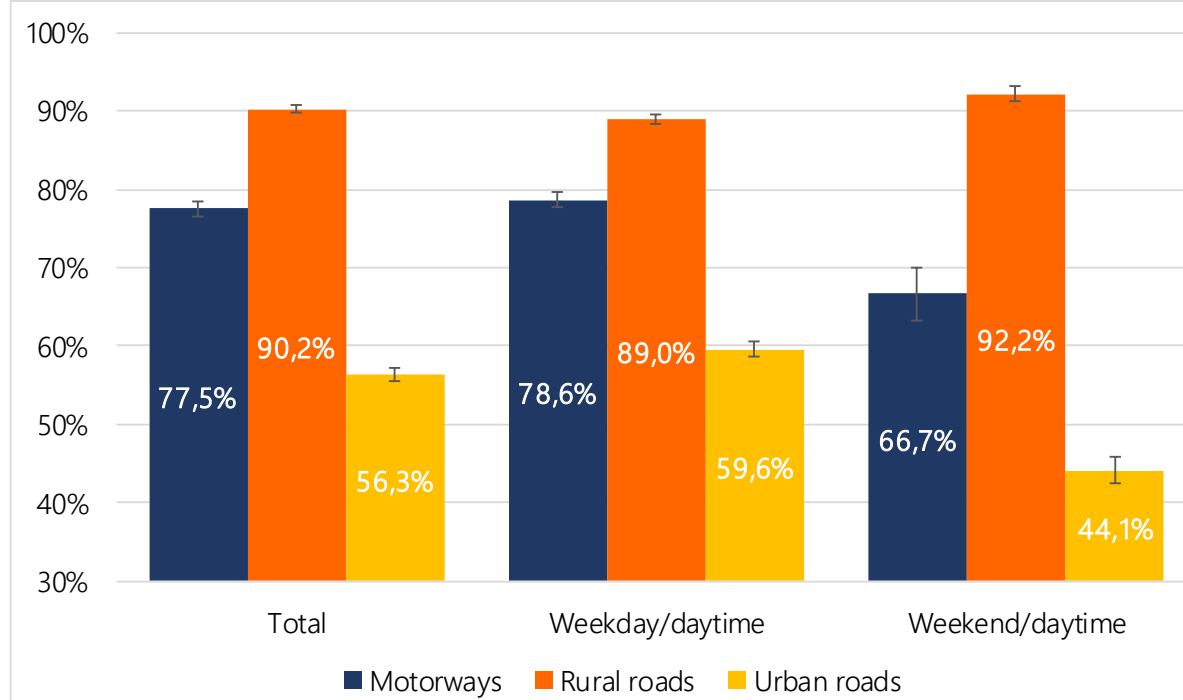
Data Collection

- **Roadside surveys** were carried out in Spring 2022 in order to collect data for the four following road safety KPIs:
 - KPI Speed
 - KPI Seat belt
 - KPI Helmet
 - KPI Driver Distraction
- The roadside surveys were carried out in appropriately selected locations in **15 regions** of Greece.
- **150 locations in total**; 10 locations per road type (urban roads, rural roads and motorways) and region.
- All roadside surveys were carried out **during daytime**, on weekdays and at weekends.
- Data from **national databases** were collected for the KPIs on Vehicle Safety and Post-crash Care.



KPI Speed

- Speed data were collected for **34.420 vehicles**:
 - urban roads: 13.358; rural roads: 13.252; motorways: 7.810
 - weekdays: 27.251; weekends: 7.169
 - passenger cars: 25.344; vans/small trucks: 2.655; trucks/ buses/ heavy goods vehicles: 4.412; motorcycles: 2.009
- The lowest percentages of vehicles moving within the speed limits were observed on **urban roads** (56%), while the highest percentages on **rural roads** (90%).
- Among the different vehicle types, **passenger cars** and **motorcycles inside urban areas** present the lowest KPI values.



KPI Seat belt use

- Data for **28.042 passenger cars** were collected
 - 35.041 front occupants and 1.759 rear passengers
 - Motorways: 6.855; rural roads: 9.489; urban roads: 11.688
 - Weekdays: 21.649; weekend: 6.393
- Seat belt use rates for passenger car **drivers and all front occupants** (drivers and front passengers) are similar.
- For the **rear passengers**, the seat-belt use rate is significantly lower (53,9%).
- For all types of vehicle occupants, seat belt use rates are higher on **motorways** and during the **weekend**.

Road Type	Driver	Front Occupant	Rear Passenger
Motorways	83,5% (82,6%-84,4%)	85,3% (84,6%-86,1%)	65,5% (60,8%-70,2%)
Rural Roads	66,6% (65,7%-67,6%)	67,4% (66,5%-68,2%)	54,3% (50,3%-58,2%)
Urban Roads	70,0% (69,2%-70,9%)	71,3% (70,5%-72,0%)	52,7% (49,1%-56,2%)
Total	68,5% (68,0% -69,1%)	69,5% (69%-70,0%)	53,9% (51,6%-56,2%)

Time Period	Driver	Front Occupant	Rear Passenger
Weekdays	67,5% (66,8%-68,1%)	68,4% (67,8%-68,9%)	50,5% (47,8%-53,2%)
Weekend	71,1% (70,0%-72,2%)	72,3% (71,3%-73,2%)	61,9% (57,2%-66,5%)
Total	68,5% (68,0%-69,1%)	69,5% (69%-70,0%)	53,9% (51,6%-56,2%)



KPI Protective systems (Helmet)

- Data for **3.717** motorcycles were collected:
 - 3.186 Riders; 531 Passengers
 - urban roads: 2.387, rural roads: 614, motorways: 185
 - weekdays: 2.474, weekends: 712
- **80,1% of motorcycle riders** wear a helmet, while the respective percentage for the motorcycle passengers is lower (63,5%).
- The highest rates of helmet use for both riders and passengers were observed on **motorways**

Road Type	Rider	Passenger
Motorways	95,1% (91,9%-98,2%)	92,3%
Rural Roads	81,5% (78,4%-84,6%)	61,8% (52,7%-70,9%)
Urban Roads	77,0% (75,3%-78,7%)	63,9% (59,2%-68,7%)
Total	80,1% (78,7%-81,5%)	63,5% (59,4%-67,6%)

Time Period	Rider	Passenger
Weekdays	82,4% (80,9%-83,9%)	70,4% (66,0%-74,8%)
Weekend	75,5% (72,4%-78,7%)	49,9% (40,8%-59,1%)
Total	80,1% (78,7%-81,5%)	63,5% (59,4%-67,6%)



KPI Distraction

- The KPI concerns passenger cars, light goods vehicles/vans and buses.
- Data for **36.858 drivers** were collected.
 - urban roads: 14.526; rural roads: 11.906; motorways: 10.426
 - weekdays: 29.148, weekends: 7.710
 - passenger cars: 28.042; vans/small trucks: 3.186; light goods vehicles: 4.681; buses/coaches: 949
- **92,3%** of drivers are not using a mobile phone while driving, with the highest KPI value percentage being observed for bus drivers.
- As for car drivers, the highest use of mobile phone while driving is observed on **urban roads**.

Road Type	KPI
Motorways	92,0% (91,5%-92,5%)
Rural Roads	93,6% (93,1%-94,0%)
Urban Roads	90,6% (90,1%-91,1%)
Total	92,3% (92,0%-92,6%)

Time Period	KPI
Weekdays	91,5% (91,1%-91,8%)
Weekend	92,4% (93,9%-94,9%)
Total	92,3% (92,0%-92,6%)

Vehicle Type	KPI
passenger car	92,0% (91,7%-92,4%)
light goods vehicle	90,5% (89,6%-91,3%)
bus/coach	98,0% (97,1%-98,9%)
vans, small trucks	94,8% (94,0%-95,5%)
Total	92,3% (92,0%-92,6%)

KPI Vehicle

- Greece in 2020 had a passenger car fleet with an **average age of 17,4 years**.
- Of the 76.988 new cars registered this year, **89,2% are rated with 4 Euro NCAP stars** or above.
- **67,5%** of newly registered passenger cars them are rated with **5 Euro NCAP stars**.
- About **5%** of vehicles are inspected with **major or dangerous deficiency** in technical inspections.

	New Passenger Cars	
	2019	2020
KPI percentage-threshold of 4 stars (excl. no star rating cars)	90,3%	92,4%
KPI percentage-threshold of 4 stars	88,4%	89,2%
KPI percentage-threshold of 5 stars (excl. no star rating cars)	61,3%	69,9%
KPI percentage-threshold of 5 stars	60,0%	67,5%

	New Passenger Cars	
	2019	2020
Average age of the vehicle fleet	16,8	17,4
% of vehicles inspected with any major or dangerous deficiency in technical inspections	5,1%	4,5%



KPI Post-crash Care

- The national EMS database covers only **17 Regional Units** out of 74 in total, representing thus 54% of the total population. No other data are available in Greece.
- Available data for **23.408** calls in 2019 and **18.861** calls in 2020
- For about **8%** of the interventions, the response times were **unknown/ erroneous**
- The response time of the emergency services is on **average 20 minutes** after the call following a road crash, while the **95th percentile is 64 minutes**.

Response Time (min)	2019	2020
KPI - 95 th Percentile	71	64
75 th Percentile	35	32
50 th Percentile	21	20



Conclusions

- Within the Baseline project, Greece collected data for 7 KPIs for first time, which are also comparable with those of the other EU countries.
- The detailed results for the Key Performance Indicators consist valuable information for documenting targeted road safety actions and monitoring road safety progress over this decade.
- Further analysis of these results, alongside with the related exposure and road crash data could reveal the real dimension and main causes of the road safety problem in Greece.

Key →

Performance →

Indicator →



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