

ROAD SAFETY WITHIN STRATEGIC PAPERS/ DOCUMENTS

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Abstract: Authors of the article provide an analysis of progress on road safety in the Slovak Republic and selected EU member states with regards to the country strategic papers and strategic plan of the EU on road safety. The article focuses particularly on statistical data on the number of fatal road traffic crashes as well as causes of road traffic accidents. This article aims to analyse the strategic implementation process on road safety and indicate plausible causal development of crucial factors within the EU, in the Slovak Republic and selected Member States of the EU.

INTRODUCTION

Road safety is a matter of concern and a strategic political objective by all democratic governments, including the member states of the EU. They are led to do so by the fact that the road traffic death rate worldwide is constantly growing. According to WHO reports on the global state of road safety, in 2016 alone it was 1.35 mil. people [1]. On the global scale, there are more road traffic-related deaths than of HIV / AIDS, tuberculosis or diarrhoeal diseases [2]. A very concerning finding is the fact of the fatal road crashes to be the most common cause of death among young people at the age of 5 to 29 on a global scale.

European countries witness little improvement compared to the situation worldwide, as a consequence of the effective measures taken by the member states of the EU and the European Commission. This is evidenced by the 43% decrease in road traffic fatality in the period 2001-2010 and by a further 21% in years 2010 - 2018. Nevertheless, in 2018, 2.150 people died in road traffic accidents in the EU and 135,000 were seriously injured [3]. The global COVID-19 pandemic had a significant impact on road safety worldwide, resulting in a lower volume of goods and passengers. According to the report by EC Transport Commissioner Adina Valean, there were 18,800 road traffic-related fatalities in 2020 that represents a decrease of 4,000 casualties, ranking European roads among the safest in the world [4]. However, it is further noted that the EU is lagging on its strategic goal to reduce the number of road accidents deaths and encourages further action to prevent rise back to the figures before the COVID-19 pandemic.

The Country Strategy Papers adopted by the governments of individual Member States, as well as the European Commission's Strategic Plan, has been developing coherent strategic road safety objectives since 1991 and these objectives are continuously refined based

on analytical results and 10-years long periods assessments with the timeframe to 2030 and with long-time horizon to 2050.

These papers set out the strategic targets, objectives, means and tools for their implementation process. The strategy feasibility is reflected in the progress of road safety, in particular, national and international statistics on the numbers and causes of fatal accidents and of road traffic-related serious injuries. These data are a crucial criterion for assessing the ability of countries to meet ambitious strategic goals.

This article aims to evaluate the current stage of the strategic goals implementation process within the EU and the selected Member States in the period 2002 - 2018 based on quantitative analysis of available data. The authors of the article emphasise the comparison of strategic goals set out by the Slovak Republic authorities on road traffic death rates in 2001, 2019 and 2020.

The research object includes strategy papers of the EU and the Slovak Republic on road safety and statistical data on the number and cause of road-traffic fatalities within the EU and the selected Member States bordering Slovakia, Romania and Bulgaria.

Analytical-synthetic method, comparative, mathematical-statistical method and also deductive-inductive method are applied in the work.

ROAD SAFETY WITH REGARDS TO EU STRATEGIC PLAN

A Directorate-General for Mobility and Transport (DG MOVE) has been created to manage and coordinate joint action by the EU and the Member States on road safety. Its main tasks also include ensuring the highest possible security standards by reducing road-traffic threats while increasing the total volume of traffic.

Its strategic action plans, evaluation reports, policy frameworks, conferences and statistic data are set to carry out this key task. DG MOVE cooperates with the European Parliament, the Council of the EU, the European Economic and Social Committee and the Committee of the Regions.

We choose few current strategic papers issued by the EC:

- *Europe on the move – Sustainable mobility for Europe: safe, connected and clean.* [4]. This paper declares traffic safety as its top priority. EU aims to reach the mid-term goal to reduce serious injuries and deaths by 50% by 2030, along with the vision zero in the long term to ultimately avoid road traffic deaths by 2050.
- European Commission has presented a common *Road Safety Policy Framework 2021-2030* and *Strategic Action Plan on Road Safety 2021-2030*. Outlining measures of the Plan of Action:
 - Enhancement road traffic safety management
 - Financial support on road safety
 - Safe public roads and roadsides
 - Vehicle safety
 - Safe road traffic for all road users
 - Fast and efficient emergency response in the road traffic
 - Future on road traffic safety
 - EU role on the global scale: international (global) scale of the road safety

Each of these priorities has been elaborated into the key measure of the European Commission without a specific timeframe.

- The *European Road Safety Charter* is an important aid to the EC in its efforts to achieve the set of objectives on improving road safety [5]. This charter is the largest civil society platform on road safety. To date, more than 4,000 public and private

entities from all over Europe have signed onto the Charter and joined its network to take action and advance road safety aimed at their members, employees and the rest of civil society.

Principles of the Charter:

- Care about road safety
- Act locally in a concrete way
- Support road safety in own country
- Share knowledge, collaborate and exchange good practices

The road safety progress in the period 2010-2020 in the context of the set strategic objectives can be considered satisfactory. To support our claim, we present the table on the number of road traffic death rate per million inhabitants within the EU and for selected Member States.

Table 1 Road traffic death rate per million inhabitants

Country	2010	2019	2020	% change 2010 - 2019	% change 2019 - 2020	% change 2010 - 2020
EU - 27	67	51	42	- 23	-17	- 36
Bulgaria	105	90	44	- 15	-26	- 40
Czech Republic	77	58	48	- 24	-16	- 35
Hungary	74	62	46	- 16	-25	- 39
Austria	66	47	38	- 29	-19	- 39
Poland	103	77	65	- 25	-15	- 37
Romania	117	96	85	- 18	-12	- 42
Slovakia	69	50	45	-18	-9	- 33

Source [6]

Table shows that despite the strategic target to reduce the number of road traffic fatalities by 50% compared to 2010, it has been achieved neither by the EU nor by any of the Member States in question. As we have mentioned in the introduction, certain road safety changes, particularly in 2019 and 2020, were affected by the overall reduction of road transport due to the COVID-19 pandemic. The EU reached 36% of the initially proposed 50 % cut of death rate by the end of 2020. Out of the Member States listed in the table, Romania came closest with 42%, BULGARIA WITH 40%, Bulgaria with 40%, Austria and Hungary with 39%. On the other hand, Slovakia reduced the number of deaths by only 33% in the period 2010-2020. On the other hand, to provide a more complex standpoint, we shall compare the number of road traffic fatalities between 2010 and 2019, thus not affected by a pandemic. Such perspective demonstrates that the EU meets the commitment only to 23%, Austria to 29%, Poland to 25% and the Czech Republic to 24%. On the other hand, the lowest percentage was recorded by Bulgaria with 15%, Slovakia and Romania both by 18%.

For the record, only Greece managed to meet the target to reduce road traffic fatality by 50% in 2010-2020 (54%), followed by Croatia, Spain and Portugal (all 44%)

The overall progress of the road traffic death rate in comparison to EU strategic targets: is provided in the table:

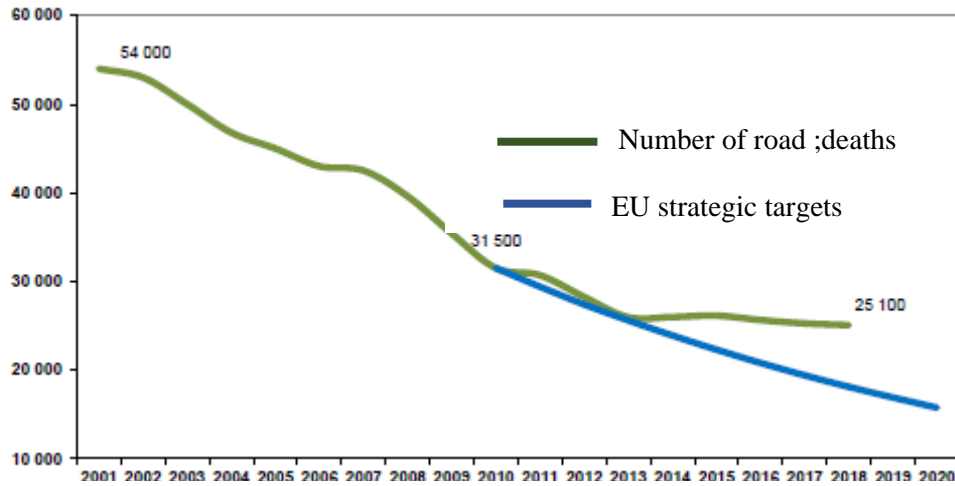


Fig.1 Death rate on road accidents in EU and strategic targets in the period 2001-2022

Source: [6]

Statistic data from 2018 show that within the EU, the highest number of fatal traffic accidents happened on rural roads up to 53%, urban areas of cities and municipalities 38% and the lowest number, only 9% of fatal crashes took place on motorways, therefore the priority of the Strategic Action Plan to increase road safety regarding its serviceable condition is deemed reasonable, while particular care should be paid to road infrastructure maintenance and repairs concerning all member states.

Following graph 1 shows a percentage share of fatal road accidents based on the road user involved in the crash. The highest number of deaths was caused by car (44%), followed by pedestrians (20%), motorcycles (18%), cyclists and other (both 9%)

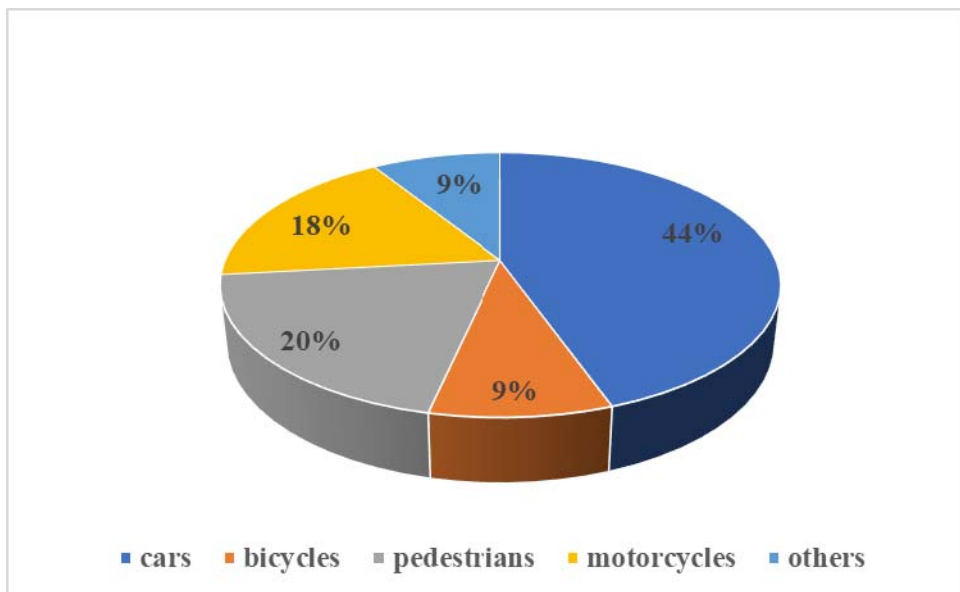


Fig.2 % share within EU based on road user involved in crash

Source: [6]

Based on provided evidence we can state that priorities of EU Strategic Action Plan such as vehicle safety, safety of road users as well as fast and efficient emergency response are adequate in terms of overall road safety progress.

ROAD SAFETY WITH REGARDS TO STRATEGIC PLAN OF SLOVAK REPUBLIC

Road safety is deemed to be the highest priority by the Slovak Republic authorities, representatives of government, non-governmental organizations, but also for society as such. As an EU Member State, Slovak Republic follows the decisions, directives and recommendations of the Council of the EU, the European Commission and their institutional bodies to implement such measures in the country strategy papers.

The Central State Administration Body on traffic management is the Ministry of Transport and Construction of the Slovak Republic. Transport Division develops and coordinates activities on the implementation of the *Strategic Transport Plan until 2030* [7]. This document aims to set the direction of development of the transport sector, identifies traffic bottlenecks in transport infrastructure and, under European strategic and development plans, elaborates a development plan with a horizon 2030, sets strategic goals and measures for their implementation. Road safety is one of the key issues and is therefore given specific attention, especially in terms of safety and environmental issues. It focuses on the impact of the quality of transport infrastructure on the road traffic death rate on first-class roads, on the monitoring of noise and air quality, as well as on the impact of public and sustainable local and regional transport and its safety. Department of Road Safety is responsible for road safety and:

- development of the transport policy of the Slovak Republic on road safety and ensures its implementation,
- legislative, strategic, conceptual documents and methodological guidelines on road safety,
- implementation of the Road Safety Enhancement Strategy in the Slovak Republic,
- activities on road safety management according to Act no. 249/2011 Coll. on Public Road Safety Management,
- educational and public awareness-raising activities aimed at all categories and age groups of road users,
- cooperation with media and other entities for a suitable effective influence on road users.

Department of Road Safety has introduced the *National Road Safety Plan of the Slovak Republic 2011 - 2020 - Strategy for Road Safety Enhancement in the Slovak Republic in the years 2011 - 2020* [8]. It contains the following targets and proposed measures for implementation:

- reduction of traffic accidents due to speeding and failure to adapt the speed to road and traffic conditions,
- reduction of alcohol and drug-impaired driving,
- reduction of road accidents among vulnerable road users,
- enhance road safety by effective traffic education in elementary and high schools and the training of applicants for driving licenses in driving schools,
- improve road infrastructure safety,
- enhance vehicle safety standards and the introduction of ITS,
- enhance the safety of road freight and public transport,
- improve the post-crash response,
- improve road safety management.

The National Plan for 2021-2030, with the Slovak Republic as a part of the Stockholm Declaration, is in the finalization process, commitment to halve the number of road traffic deaths and seriously injured in road accidents by 2030.

In the context of the set country and EU strategic goals, the progress of road safety in the Slovak Republic can be granted as favourable even if it is not possible to meet the strategic target in its entirety. The graph shows the development of the number of road traffic deaths in the Slovak Republic between 2002 and 2020 in comparison to the proposed target.

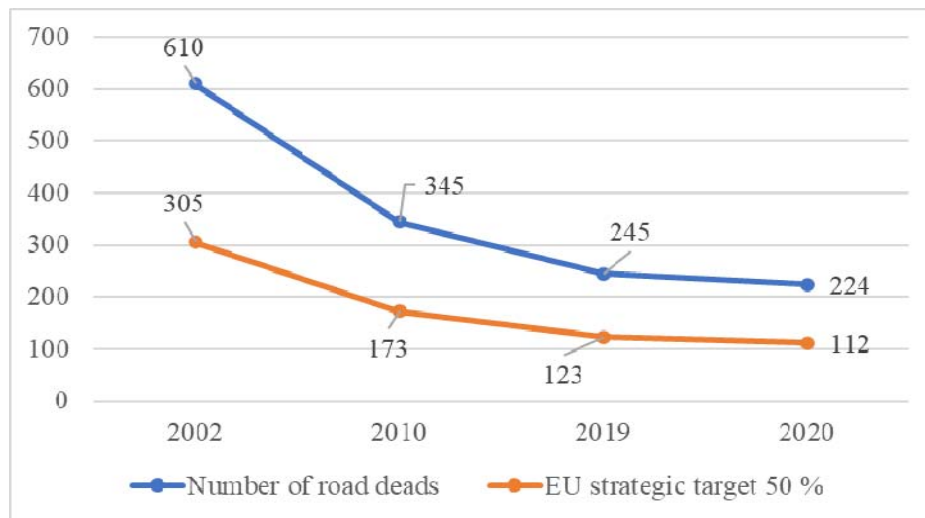


Fig. 3 Road traffic death rate in the period 2001 - 2020

Sources: [8,9]

Road traffic death rate according to the type of collision in SR in 2020 shows approximate correspondence to the average fatality figures in the EU. The cyclist fatality rate is 9% in Slovakia and EU average, the pedestrian fatality rate is 13% and the motorcyclist fatality rate is 19%. Data mark the noticeably higher number of deaths related to car accidents up to 59%.

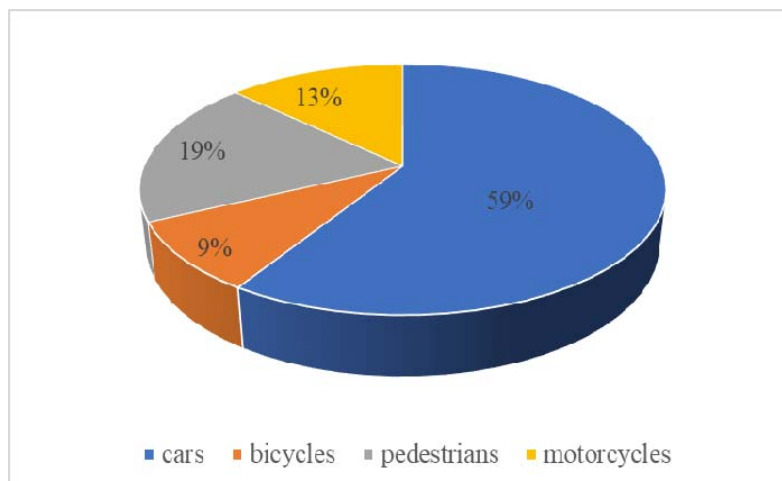


Fig 4 % share of road traffic casualties according to the type of collision

Source: [9]

Analysis of the most common causes of road traffic deaths in 2020 demonstrates that out of the total number of 224 casualties, up to 54 people were killed due to driver negligence (breach of driver duties), 52 people due to speeding, 34 due to improper driving or reckless driving, 18 people were killed in pedestrian-vehicle accidents, 11 due to breach of obligations of a road user, 10 for improper turns, 8 for improper passing, 7 misconduct at a level crossing 7 for incorrect driving through an intersection

Percentage share of data provided in the figure 5.

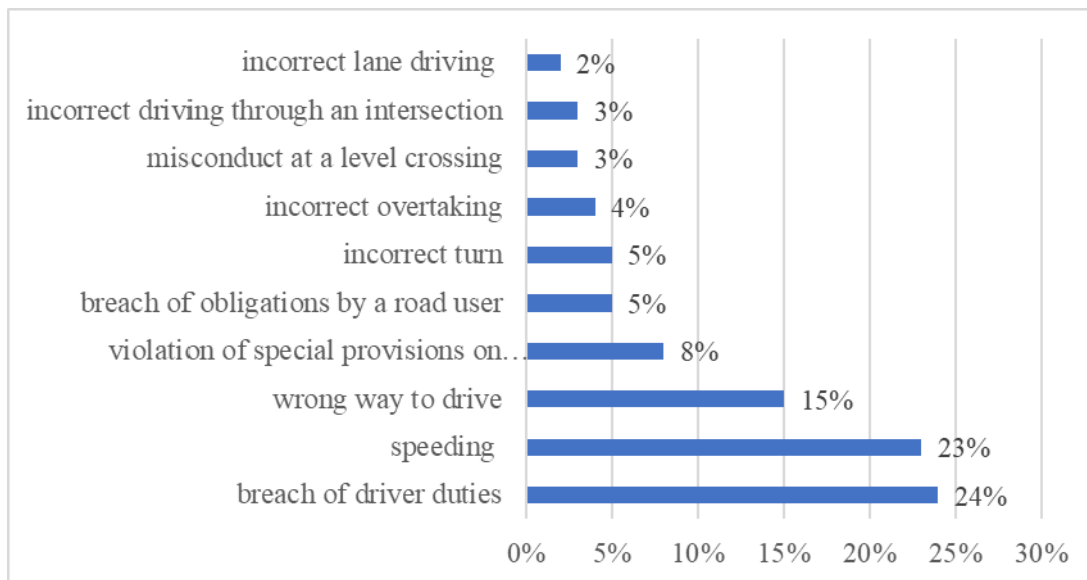


Fig. 5 The most common causes of fatal road traffic accidents in 2020 in % share

Source: [9]

CONCLUSION

In conclusion, we might note that the EU Member States find road safety as one of the top priorities and deal with such issue with adequate importance. Proposed strategic targets to reduce the number of road traffic fatalities by 50 % and to halve the number of people seriously injured due to traffic accidents in the period 2021-2030, and in regards to Vision zero to ultimately avoid road traffic fatality by 2050 is rather ambitious. Up-to-date statistic data lead us to the assumption that meeting such a goal is impossible. Cooperation of EU authorities, governing bodies and non-government organizations within the Member States and overall public interest is needed in order to do so. The Slovak Republic has created legislative, structural, personnel, but also a financial framework to meet the set of goals and objectives in the gradual introduction of intelligent transportation systems.

REFERENCES:

- [1] WORLD HEALTH ORGANISATION.2018. *Global Status. Report of Road Safety*. <https://www.who.int/publications/i/item/9>
- [2] EUROPEAN COMMISSION (2018), *Europe on the move – Sustainable mobility for Europe: safe, connected and clean*, COM (2018) 293 final.
- [3] MOBILITY AND TRANSPORT.2022.*Road safety. 4000 fewer people lost their lives on EU roads in 2020 as the death rate falls to an all-time low*. https://ec.europa.eu/transport/modes/road/news/2021-04-20-road-safety_sk

- [4] EUROPEAN COMMISSION.2019. Commission staff working document. EU Road Safety Policy Framework 2021 – 2030 – Next steps towards "Vision Zero". https://ec.europa.eu/transport/road_safety/sites/default/files/move-2019-01178-01-00-en-tra-00_3.pdf
- [5] MOBILITY AND TRANSPORT. 2022. European Road Safety Charter. https://webgate.ec.europa.eu/multisite/ersc/about-the-charter/what-we-do_en
- [6] EUROPEAN COMMISSION. 2020. Road Safety. Key Figures 2020. <https://ec.europa.eu/roadsafety/>
- [7] MINISTRY OF TRANSPORT AND CONSTRUCTION SR.2016. Strategic Transport Plan until 2030 – II. phase. <https://www.mindop.sk/ministerstvo-1/doprava-3/strategia/strategicky-plan-rozvoja-dopravy-sr-do-roku-2030/strategicky-plan-rozvoja-dopravy-sr-do-roku-2030>
- [8] MINISTRY OF TRANSPORT AND CONSTRUCTION SR.2020. Strategy for Road Safety Enhancement in the Slovak Republic in the years 2011 - 2020. Bratislava. ISBN 978-80-8076-097-7.
- [9] PRESIDIU OF THE POLICE FORCE.2021.Evaluation of the traffic safety situation for 12 months 2022. https://www.minv.sk/swift_data/source/policia/dopravna_policia/dn/prezentacie_dbs/2020/Vyhodnotenie%20DBS%20za%20rok%202020%20def.pdf

ПЪТНА БЕЗОПАСНОСТ В СТРАТЕГИЧЕСКИТЕ ДОКУМЕНТИ

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Ключови думи: *Пътна безопасност, Стратегия на ЕС за пътна безопасност, Национален план за пътна безопасност на Словашката Република, Оценка на ситуацията на пътната безопасност в Словашката Република.*

Резюме: *Авторите на статията представят анализ на напредъка на пътната безопасност в Словашката Република и избрани държави-членки на ЕС по отношение на стратегическите документи на страната и стратегическия план на ЕС за пътната безопасност. Статията се фокусира най-вече върху статистическите данни за броя на пътнотранспортните катастрофи с фатален изход, както и върху причините за пътнотранспортните произшествия. Тази статия има за цел да анализира стратегическия процес на осъществяване на пътната безопасност и да посочи правдоподобно причинно-следствено развитие на решаващи фактори в рамките на ЕС, в Словашката Република и избрани държави-членки на ЕС.*