

Monitoring National Road Safety Strategies in the EU

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Abstract. The EC has released an ambitious Road Safety Policy Framework for the decade 2021-2030, setting new intermediate targets to halve the number of fatalities and the number of serious injuries on European roads by 2030. The need for monitoring the implementation of the road safety strategies and the road safety progress over the decade has been highlighted by almost all EU Member States, so that preventive measures can be taken in time in order to achieve the goals set at the end of decade. The objective of the current study is to provide an overview of the existing national road safety strategies of the EU Member States and current practices in monitoring the progress of the implementation of the national strategies and in assessing the effectiveness of strategy interventions in road safety. Additionally, the development of a tool for monitoring the implementation of the national road safety strategies/ action plans in the EU Member States for the decade 2021-2030 is presented. This monitoring tool aims to motivate and assist the EU, national authorities, industry, and the road users by supporting the implementation of policies, programmes and measures, exchanging best practices among the countries and benchmarking performances.

Keywords: road safety, road safety strategy, European Union

1 Introduction

Road safety constitutes a significant public health problem, with 1,35 million people being killed in road crashes every year worldwide [1]. In the European Union (EU), almost 20,000 people were killed in road crashes in 2021. While Europe is the safest continent in terms of road safety, progress in reducing EU-wide road fatality rates has stagnated in recent years [2]. The progress made so far is a 12% decrease in road fatalities for the 27 EU Member States between 2019 and 2021 and with lower fatalities numbers in almost all the countries.

Over the previous decade (2011-2020), the EC had set a target of halving road fatalities in 2020 compared to 2010. However, the European Union did not achieve its target, but instead a decrease of 36% in road fatalities was recorded. Out of the 27 EU Member States, only one country achieved its target of halving road fatalities in 2020.

Within this context, the European Commission released an ambitious Road Safety Policy Framework for the decade 2021-2030, setting new intermediate targets of reducing the number of road deaths by 50% between 2020 and 2030, as well as reducing the

number of serious injuries by 50% over the same period. The Road Safety Policy Framework also suggests the monitoring of road safety progress through a set of Key Performance Indicators (KPIs), which are directly related to the prevention of road crash casualties [3]. Almost all EU countries have also developed and released their new national road safety strategies or action plans for the decade 2021-2030, setting quantitative targets for reducing road crash fatalities and injuries.

The objective of the current study is to provide an overview of the existing national road safety strategies of the EU Member States and current practices in monitoring the progress of the implementation of the national strategies and in assessing the effectiveness of strategy interventions in road safety. Additionally, the development of a tool for monitoring the implementation of the national road safety strategies/ action plans in the EU Member States for the decade 2021-2030 is presented. The results of this study are based on work carried out in the project “Support to the European Road Safety Observatory”.

2 Methodology

For the purposes of the current study, a short survey was distributed to national road safety stakeholders involved in the implementation and monitoring of the road safety strategies in the EU countries. Through the survey, information was asked on the current national road safety strategies and the national practices implemented or foreseen for the current decade concerning the monitoring of the implementation of the road safety strategies and the evaluation of their impact on road safety progress.

13 Member States of the European Union responded to the survey, i.e., Belgium, Bulgaria, Denmark, Finland, Germany, Greece, Hungary, Italy, Luxembourg, Malta, Poland, Slovakia, and Spain. Also, the current road safety strategies/action plans of all EU Member States were reviewed, and an overview of their road safety targets is provided below.

3 Overview of EU National Road Safety Strategies

Most of the EU Member States have adopted and implemented strategic plans with specific targets for more than two decades as a key success tool to continuously improve safety in the European Union. All road safety strategies of the current period include quantified road safety targets, for road safety outcomes, i.e., road crash fatalities and serious injuries. Also, the monitoring of road safety progress is also foreseen in most strategies, most of them through a set of performance indicators. In order to better monitor the road safety evolution and take the appropriate measures in time, some of the Member States have also set quantified targets for these indicators.

3.1 Timeframe

Out of 27 European Union Member States, information was retrieved for the national road safety strategies for 26 (except Romania). For almost all Member States of the European Union, the national strategies/action plans span the decade 2021-2030. It is noted, however, that the road safety strategy of Ireland is divided into three phases, i.e., 2021-2024, 2025-2027, and 2028-2030.

As shown in Table 1, the road safety strategies/action plans for six countries span different time periods

Table 1. Timeframe of national road safety strategies/action plans in EU

Time Period	Member States
2021-2030	18 EU MS: Austria, Bulgaria, Czechia, Denmark, France, Germany, Ireland, Greece, Spain, Croatia, Italy, Cyprus, Lithuania, Netherlands, Poland, Portugal, Slovakia, Sweden
2021-2025	Belgium
2016-2025	Estonia
2022-2026	Finland
2020-2022 & 2023-2025	Hungary
2021-2027	Latvia
2019-2023	Luxembourg
2014-2024	Malta
2023-2030	Slovenia

3.2 Targets

Fatalities and Serious Injuries

Almost all EU Member States have adopted the safe system approach in their national strategies and vision zero for 2050, meaning zero fatalities in road crashes up to 2050. In order to achieve this, most EU countries have adopted intermediate targets for 2030. More specifically, the EU targets for the decade 2021-2030 of halving road deaths and serious injuries by 2030 have also been adopted by most Member States in their national policies.

Due to the covid pandemic in 2020 and the related traffic restrictions that led to a significant reduction of road crashes, this year is not considered as a typical year for road safety outcomes. Thus, the European Commission set 2019 as the baseline year for the target of reduction of fatalities and serious injuries by 2030. However, the baseline year for the EU Member States may differ from country to country (e.g., 2020, 2021, or average fatalities of 2017-2019, etc.).

It is also noted that some Member States have set either different targets or additional sub-targets for specific road users or crash types. An overview of these targets is provided in Table 2.

Table 2. Road safety targets per Member State

Country	Targets
Denmark	< =90 fatalities and 900 serious injuries in 2030
Germany	- 40% in fatalities and a significant reduction in serious injuries
Greece	-50% in fatalities and serious injuries, sub-targets for specific road users or crash types (motorcyclists, fatalities on islands, in cities, on motorways, in single vehicle crashes). Intermediate targets for 2025 have also been set.
Ireland	Target for the end of Phase 1: -15% in road fatalities and -10% in serious injuries in 2024
Poland	-50% for all fatalities, also max. 397 deaths of pedestrians, 129 cyclists, 191 moped users and motorcyclists, 133 victims in alcohol related crashes
Spain	-50% for all serious injuries, also max. 1,237 pedestrians, 686 cyclists, 758 moped users and motorcyclists, 442 victims in alcohol related crashes
Sweden	also, different targets in urban and non-urban areas per user type -25% in fatalities by 2030, max. 3,100 seriously injured in 2030, -25% in seriously injured pedestrians by 2030, -25% reduction in seriously injured cyclists by 2030

Key Performance Indicators

As already mentioned above, the EU Policy Framework for road safety for the decade 2021-2030 suggests monitoring the road safety progress through a set of 8 Key Performance Indicators (KPIs), which concern the safe road use (i.e., speeding, use of seat-belt and child restraint systems, use of helmet, driving under the influence of alcohol, driver distraction), vehicle safety, infrastructure, and post-crash care [3]. The European Commission in collaboration with road safety experts from the EU Member States defined these KPIs, while the first data collection under a common methodological protocol was carried out in 2021-2022 within the Baseline project [4].

Most EU countries have adopted these KPIs in order to monitor road safety progress over the current decade. However, only four countries (Austria, Belgium, Greece and Sweden) have set specific targets for these KPIs for the end of the decade. More specifically, Austria has set specific targets for KPIs related to safe road use, while targets on vehicle safety, post-crash care, infrastructure and attitudes towards risky behaviour will be defined in separate action plans. Belgium has set a 50% reduction for all behavioural KPIs by 2030. Greece has also set different targets per KPI to be achieved in 2030 and sub-targets for specific road types or road user types. Finally, Sweden has set targets for 18 indicators for the end of the decade.

3.3 Monitoring the implementation of road safety strategies

Based on the responses of the Member States in the survey, it is shown that practices concerning the monitoring of the implementation of road safety strategies/action plans vary among the countries. Monitoring is carried out on an annual or biennial basis,

while few countries have also performed ex-post evaluation of the impact of their national policies at the end of the implementation period of previous strategies.

As shown in Table 3, monitoring may include either the state of the implemented measures or actions, the work progress of the responsible authorities or the state of the road safety situation, mainly based on the road safety outcomes (crashes and casualties). It is worth noting that the most complete procedures regarding the monitoring of the implementation of a road safety strategy and the evaluation of its impact in road safety includes the following steps:

- evaluation of road safety outcomes achieved in relation to the target set,
- evaluation of KPIs achieved in relation to the target set,
- degree of completion of the actions/measures of the strategy/action plan,
- qualitative assessment, based on feedback from responsible authorities or related stakeholders.

Table 3. National monitoring practices

Country	Monitoring practices
Belgium	Monitoring of measures of RS plan. Ex-post evaluation based on road safety outcomes & KPIs
Bulgaria	On an annual basis, monitoring work progress for responsible authorities
Finland	The monitoring group meets at least twice a year, supervises the implementation and impacts of the measures
Germany	Biennial reports on implementation of road safety measures
Greece	It is envisaged in the RS strategy for 2021-2030 decade
Italy	It is envisaged - two intermediate evaluations in correspondence with the intermediate objectives and an ex-post evaluation
Malta	Currently carried out (at the end of the RS strategy)
Poland	On an annual basis - State of road safety and activities
Slovakia	On an annual basis - Implementation of the measures of the previous year
Spain	RS outcomes & KPIs on an annual basis, progress of implementation of measures every two years

4 A Monitoring Tool for National Authorities

A comprehensive tool for monitoring and assessing national road safety strategies and action plans is currently being developed within the project, which will be available in the European Road Safety Observatory (ERSO). The methodology components of this tool include close cooperation with national authorities, the development of a set of specially designed quantitative and qualitative indicators, a specially designed matrix with all indicators, and a specially designed dashboard with the performance and progress results.

The development of the tool is based on a three-step approach: road safety performance, monitoring strategy implementation and effectiveness evaluation. Specific indicators have been set for the two first steps, including related contextual framework

(socio-economic indicators, road safety management, legislation), crash fatalities and injuries (characteristics and trends, comparison with targets), Safety Performance Indicators (characteristics and trends, comparison with baseline and targets), and the progress of implemented measures (budget spent, progress percentage in time). The strategy implementation effectiveness is evaluated by attempting to link the actions progress with the respective safety performance. A methodology guidance is developed for this purpose, with focus on before-after and time-series analyses.

5 Conclusions

To conclude, most of the EU Member States have adopted and implemented strategic plans for more than two decades. Setting ambitious but also realistic targets has been proved a key success tool to continuously improve safety in the European Union. For the decade 2021-2030, most EU countries have released their national road safety strategies aiming to halve road fatalities and serious injuries by 2030. The need for monitoring the implementation of the road safety strategies and the road safety progress over the decade has been highlighted by almost all countries, so that preventive measures can be taken in time in order to achieve the goals set at the end of decade.

Within this context, the monitoring tool of the implementation of the European national road safety strategies, that is currently developed for the European Road Safety Observatory, is considered as highly important as it will lead to higher transparency and accountability of national road safety authorities and consequently to improved efficiency of national road safety strategies. Also, such a monitoring tool will motivate and assist EU, national authorities, industry, and the road users by supporting policies, programmes and measures, exchanging best practices and benchmarking performances.

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