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**Глобальная безопасность на дорогах: основы международного взаимодействия**

**Global Road Safety: A Framework for International Cooperation**

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# Introduction

*The relevance* of the topic lies in the fact that road safety is a critical issue globally, with a significant number of fatalities and injuries occurring each year. The state of global road safety presents a significant social and economic challenge and is defined as a global crisis. An analysis of the number of people killed in road accidents globally shows a fifteen-year continuity. According to the World Health Organization, some 1.35 million people die each year worldwide in road traffic crashes. Compared to the past decade, when about 1.2 million people[[1]](#footnote-1) died in accidents, today's number reflects an increase of 12.5 per cent. The sheer number of deaths from road traffic crashes has elevated the need for road safety to the top of government policy agendas around the world. The resolution "Transforming our world: the 2030 Agenda for Sustainable Development" highlights the importance of road safety as a key component of sustainable development. It recognizes the need for urgent action to improve road safety and calls on all countries to implement measures to reduce the number of deaths and injuries caused by road traffic accidents. The issue is not just a concern for developing countries, it also remains a challenge to developed countries.

Each day around 3,700[[2]](#footnote-2) people die in road accidents. As the most vulnerable road users, Bicyclists, motorcyclists, and pedestrians account for more than half of all fatalities. Therefore, the development and implementation of mechanisms to improve road safety at international and national levels remains a relevant and important challenge. From 2015 to 2030, it is predicted that both fatal and nonfatal crash injuries will cost the global economy $1.8 trillion (in 2010 USD).[[3]](#footnote-3) That is the same as a 0.12% annual tax on the world's GDP (gross domestic product)[[4]](#footnote-4)**.**

Researchers A. Pyankova and T. Fattakhov highlight Russia's failure to achieve targets set for reducing road accident mortality. The May presidential decree's deadlines until 2024 are too compressed for international experience and mortality rates. The researchers suggest measures to reduce injuries and mortality in road accidents, including lowering non-punishable thresholds, increasing fines, implementing a penalty points system, and imposing criminal responsibility for significant speed excess. A. Pyankova and T. Fattakhov believe that these measures would significantly improve road safety in Russia. The 2024 strategy lacks concrete goals and steps to achieve mortality reduction to the level of European countries, and does not follow the Safe System Approach. To improve road safety, Russia needs significant changes in legislation and law enforcement. The government has set ambitious goals, but achieving them may be challenging. A master's thesis investigates international and national mechanisms for improving safety, and the challenges and prospects for their implementation in Sweden, Germany, and Russia. The Russian government has set ambitious goals to improve road safety by 2024 and reduce road fatalities by half by 2030. However, there is concern that these goals may not be achieved due to the lack of a comprehensive safe system approach.

Thus, the master's thesis addresses the urgent and important problem of road safety by investigating international and national mechanisms aimed at improving safety, as well as existing problems and prospects for their implementation in Sweden, Germany, and Russia.

The *object* of the research is the international problem of road safety, while the *subject* of the research is national strategies and mechanisms for reducing mortality rates on roads in Sweden, Germany, and Russia.

*The aim* of this study is identify the most effective international practices and mechanisms for reducing road traffic injuries and deaths under conditions of limited time to achieve the goal of reducing mortality rate by 50 per cent by the year 2030.

To achieve this aim, the following *tasks* were set:

1. Analyse the activities of international organisations and their road safety activities.
2. Identify mechanisms for implementing the Sustainable Development Goals and targets (SDGs) that accompany road safety.
3. Analysis of the road safety statistics and national strategies of Sweden, Great Britain and Germany as countries that are successfully and systematically fighting road injuries and deaths.
4. Identify the problems and prospects for Russia's road safety performance, taking into account the positive experiences of Sweden, Great Britain and Germany.
5. Conduct a comparative legal analysis of the road traffic regulation mechanisms of Sweden, Great Britain and Germany in comparison to Russia.
6. To make suggestions on how to improve the road safety mechanism in Russia, taking into account the positive experience of foreign countries.

The research methodology is driven by the set tasks, reflecting an interdisciplinary approach to the problem and based on a comprehensive methodology. Quantitative comparative analysis (QCA) of statistical data on road accidents and their causes in Russia and other countries was used. The study also employed mixed methods research, combining qualitative and quantitative methods to address a wide range of tasks (including historical, formal-logical methods, as well as discursive analysis, interpretive phenomenological analysis), which are used in law, sociology, political science, and other social sciences. In Appendix 1, a table compares Russia's speed restrictions and minimum fines to those in Germany, Sweden, and the United Kingdom. The development of international legal acts, as well as legislative and law enforcement operations, practically require a comparative legal analysis of foreign experience.

Comparing different countries' approaches to road safety can be a valuable way to identify best practices and areas for improvement. Each country has its own unique political, social, and economic context that influences how it approaches road safety. Russia is the largest country in the world by land area, and its vast territory and diverse climate pose unique challenges for road safety. Russia has also experienced high rates of road fatalities, which have prompted the government to implement new road safety initiatives. Sweden, on the other hand, has been recognized as a world leader in road safety. The country has implemented a Vision Zero approach, which aims to eliminate all road fatalities and serious injuries. Sweden's success in reducing road fatalities and serious injuries has made it a model for other countries to follow. Germany is the largest economy in Europe and has a well-developed transportation system. The country has also been successful in reducing road fatalities in recent years, and its approach to road safety combines technology, education, and enforcement. The United Kingdom has a long history of road safety initiatives, including the introduction of seat belt laws and speed cameras. The UK has also made significant progress in reducing road fatalities, and its approach to road safety emphasizes partnerships between government, industry, and civil society. What make the UK special among the countries is the fact of the left-hand traffic (LHT). In practical terms, the comparative legal analysis of foreign experience plays an important role in legislative and law enforcement activities and in international practice in preparing international legal acts.

*The empirical basis* of the dissertation was composed of materials from the legislative, executive, and judicial branches of government, UN conventions, reports and statistical data from the International Transport Forum, WHO, and UNICEF, studies on the relationship between speed and road mortality, national road safety strategies of Sweden, Germany, and Russia, research results on law enforcement issues related to the organization of safety for all road users, among others. These sources provided a comprehensive and diverse set of data and information that allowed for a thorough analysis of road safety issues and the development of effective strategies for improving road safety.

The issue of mortality in road traffic accidents and policies aimed at reducing mortality have been studied by Russian researchers such as A. Pyankova and T. Fattakhov from the HSE Institute of Demography, as well as Y. Kalyuzhny, A. Gordeeva, V. Gavrenkovm A. Turishheva, M. Nikitin and other researchers from the Ministry of Internal Affairs. Additionally, colleagues from other countries such as Nilsson, G., Razzaghi A, Soori H, Chen S, Kuhn M, Prettner K, Bloom D, Kavousi A, Abadi A, Khosravi A, Alipour A., Ellen Kim, Peter Muennig, and Zohn Rosen have also contributed to the research in this field.

*The practical significance* of the master's thesis lies in the fact that the research findings can be used by governmental bodies, organizations, and experts who deal with road safety issues to develop and implement new strategies and measures to improve road safety. Additionally, the research results can be valuable for the scientific community that studies road safety problems, for further development and improvement of theory and methodology in this area. The results of the study can be used as material for developing a course within the master’s discipline of "International Legal and National Strategies for Sustainable Development of Modern Cities". The obtained results can be used to develop more effective strategies and policies in this area, which in turn can improve road safety and reduce the number of road traffic accidents.

*The scientific novelty* of this study lies in the fact that, for the first time, a comprehensive analysis of the problem of road safety in the context of the implementation of Sustainable Development Goal 3 has been carried out based on a comparative analysis of Swedish, German, British and Russian strategies, taking into account the prospects for the formation and implementation of a road safety mechanism in Russia**.**

Consequently, the master's thesis examines international and national procedures for enhancing safety, as well as current issues and opportunities for their implementation in Sweden, Germany, and Russia. This addresses the urgent and significant subject of road safety.

*The topic validation* was carried out through a presentation and report at the First St. Petersburg Congress of International Relations Researchers, as well as at the conference «Topical Issues in Political Geography», held in December 2023 at the Russian Academy of Sciences.

*The structure* of the research is subordinate to the formulated aim and set tasks. This study consists of an introduction, three chapters (divided into paragraphs), a conclusion that formulates the main author's conclusions, and appendices.

# Chapter 1. Stages of development of the international agenda in the field of road safety

## 

## 1.1 OECD and Road Safety at the International Transport Forum

Yet in 1953, October 17, The Protocol concerning the European Conference of Ministers of Transport, or simply the "EMCT Protocol" was signed in Brussels, Belgium. The purpose of the protocol was to establish a permanent institutional framework for cooperation and coordination on transportation issues among European countries. The EMCT Protocol was signed by the transport ministers of 16 European countries, including Italy, Belgium, Denmark, France, Norway, Greece, Austria, Luxembourg, the Netherlands, Germany, Portugal, Turkey, Sweden, Switzerland, Spain, and the United Kingdom plus the Anglo-American Zone of the Free Territory of Trieste. The US and Canada are invited as associate members. Belgium is the first country to take over the annually rotating ECMT Presidency. [[5]](#footnote-5) The signatories agreed to hold regular meetings and consultations to exchange information, discuss policy issues, and coordinate their transportation policies. The EMCT Protocol was one of the first international agreements aimed at promoting greater cooperation and coordination among European countries on transportation issues. Over time, the protocol has been expanded and updated to reflect changing circumstances and new challenges, and it continues to serve as an important framework for cooperation among European countries on transportation matters. The European Conference of Ministers of Transport (ECMT) was established by the Organisation for European Economic Co-operation (OEEC), the precursor of the Organisation for Economic Co-operation and Development (OECD)

In 1988, the OECD’s Road Transport Research Programme starts the International Road Traffic and Accident Database (IRTAD). The International Road Traffic and Accident Database (IRTAD) was established by the Organisation for Economic Co-operation and Development (OECD) in 1988 as part of its Road Transport Research Programme. The purpose of the database is to collect, analyze, and disseminate internationally comparable data on road accidents, injuries, and fatalities. IRTAD is a unique source of data on road safety, providing reliable and comprehensive information on road accidents and their consequences across countries and regions. It collects data from its member countries, which currently include 40 countries from Europe, North America, Asia, and Australia. The database covers a wide range of indicators, including road traffic accidents, fatalities, injuries, road infrastructure, vehicles, drivers, and policy measures. IRTAD has developed a number of key publications, such as the annual Road Safety Annual Report, which provides an overview of road safety trends and developments in OECD and International Transport Forum countries. The establishment of IRTAD has been instrumental in improving the availability and comparability of road safety data across countries, facilitating international cooperation and knowledge sharing in the field of road safety. The data collected through IRTAD has been used to inform policy-making, support research and analysis, and monitor progress towards international targets and goals related to road safety.

By 2005, when the Russian Federation hosted the event, many countries had joined the protocol: Japan, Serbia, Malta, Moldova etc. The following year, the International Transpоrt Forum (ITF) was created on 18 May 2006 by ministers from 43 nations. The roots of the ITF go back to 1953, establishment of the European Conference of Ministers of Transport (ECMT), an international treaty organisation to "coordinate and rationalize European inland transport of international importance". The International Transport Forum's legal foundation continues to be the ECMT.

Two years later, in 2008, the International Transport Forum published the report " Towards Zero: Ambitious Road Safety Targets and the Safe System Approach"[[6]](#footnote-6) which highlighted the need for a fundamental change in road safety policy, based on the axiom that the level of serious injuries caused by the road transport system is unacceptable.

The report was the result of a three-year collaborative effort by an international group of safety experts representing 21 countries as well as the World Bank, the World Health Organization, and the FIA Foundation (Foundation for the Automobile and Society) under the auspices of the International Transport Forum and the Organization for Economic Cooperation and Development's Joint Transport Research Centre. According to the research, a long-term goal for eradicating traffic deaths and serious injuries must be supplemented by a credible intermediate aim over a planning horizon of up to ten years.

The purpose of the report was to review the state of the art in improving road safety performance and examine the role of targets in raising the level of ambition and achieving effective implementation of road safety policies. The work aims to assist governments in raising the performance threshold by developing more systematic approaches to road safety. It highlighted the institutional management changes required in many countries to implement effective interventions through a strong focus on results and underlined the economic case for road safety investment.[[7]](#footnote-7) The key was the Safe System Approach.

The International Transport Forum pointed out nine recommendations:

**Adopt a highly ambitious vision for road safety** All nations are urged to embrace and support a degree of ambition that aims to permanently eradicate deaths and serious injuries caused by using the road transportation system. Adopting this goal will impact how the community perceives the inevitable nature of road trauma, as well as institutional and societal responsibilities and accountability, and the design of road safety solutions. This is an ambitious vision since realizing it will entail developing therapies that are somewhat different from current best practices as well as entirely new ones that are more successful. Its worth comes in part from encouraging innovation. The long-term vision needs to be supplemented with short-term goals for particular planning horizons of up to ten years.

**Set interim targets to move systematically towards the vision.** To promote increased performance and accountability, all nations should create ambitious, reachable, and scientifically derived road safety targets. These goals should be established using a system that combines institutional outputs, interventions, and intermediate and final outcomes to provide attainable goals for various intervention alternatives. To meet the transport ministers' 2002 goals for road safety, which included a 50%[[8]](#footnote-8) decrease in fatalities between 2000 and 2012, or similarly ambitious goals, extraordinary measures will be needed in the majority of OECD and ITF nations. As a result, it is advised that goals based on anticipated outcomes from particular activities be set right away in order to make a more orderly transition to the degree of ambition indicated by the targets set in 2002.

**Develop a Safe System approach, essential for achieving ambitious targets.** It is advised that all nations adopt a Safe System approach to road safety, regardless of their level of performance in this area. This strategy builds on currently used road safety interventions while redefining how the community manages and views road safety. In order to ensure that crash energy levels are below those that would result in fatalities or serious injuries, it addresses every component of the road transportation system in an integrated manner. It necessitates the assumption of shared accountability and general responsibilities between system designers and road users. It encourages the creation of the novel strategies and fresh alliances required to meet challenging long-term objectives.

**Exploit proven interventions for early gain**. Road safety performance-challenged countries should urgently carry out high-level reviews of their safety management capacity and establish long-term investment strategies, related programs, and projects to address identified capacity shortcomings. These programs and projects should incorporate tried-and-true institutional management strategies and interventions employed in nations with greater levels of success, and they should leverage best practices tools created by international organizations to support this process.

**Conduct sufficient data collection and analysis to understand crash risks and current performance.** All nations are urged to create procedures for gathering data that cover the following: final outcomes (at least deaths and serious injuries by road user); exposure measures (for example, relating outcomes to population levels, licensed driver numbers, distances traveled); intermediate outcomes (also known as safety performance indicators and including levels of mean traffic speeds, seat belt wearing, drink driving, and vehicle and infrastructure safety ratings); institutional outcomes (for example, relating outcomes to population levels, licensed driver numbers. To better understand crash and other trends, careful data analysis should be done. This will enable different intervention mixtures and intensities to be modelled and ambitious but attainable goals to be set.

**Strengthen the road safety management system.** Every nation should make a commitment to establishing an efficient management system for traffic safety and, specifically, work to generate strong results focus through their institutional management systems. A clear identification of the lead agency, the primary group of participating government ministries and agencies, their roles and responsibilities, and the performance goals in terms of institutional outputs and intermediate and final outcomes to be achieved within a defined strategy are all necessary for this results-focused approach.

**Accelerate knowledge transfer.** Knowledge transfer strategies must be backed by sufficient investment in focused programs and projects that are intended to fill institutional capacity gaps, particularly through fostering long-term learning opportunities in the target nations.

To mobilize resources and support at a level commensurate with the extent of the losses resulting from road fatalities and catastrophic injuries, strong and ongoing international cooperation will be necessary. This is particularly true for low- and middle-income nations, while it also applies to high-income nations looking for cutting-edge methods of reaching their ultimate objective of eradicating mortality and serious damage.

**Invest in road safety.** The majority of nations need to increase their understanding of the costs associated with road accidents, including what the government and injury insurance companies spend, as well as the investments made in enhancing road safety and reducing trauma. In order to win support from the entire government for funding innovative programs and for transparency in the resource allocation for crash prevention and treatment, road safety authorities need this information to prepare financial and economic evidence on the costs and effectiveness of proposed interventions. There are chances for focused investments in road safety that offer profitable returns. Practitioners and authorities in road safety should create business reasons for this investment. To meet the ambitious road safety targets, a significant increase in resources must be allocated to management of road safety and to safer transportation networks.

**Foster commitment at the highest levels of government**. To increase road safety, the highest level of sustained government commitment is required. Road safety managers must not only create evidence-based road safety programs but also promote policies that take into account political constraints like the election cycle in order to achieve this. Public education about the Safe System approach requires significant effort. Before final political consideration of new policy, there should be extensive public engagement. Road safety professionals and stakeholders have a duty to influence the political process of policy assessment by advocating for government programs skillfully and persistently, providing yearly estimates of the socioeconomic costs of road trauma, and developing a broad range of successful road safety interventions.

The report also stressed that: “Countries with different levels of performance will have different ambitions in terms of road safety improvement. For some industrialised countries, a target fatality rate of 6 fatalities per 100 000 inhabitants will be seen as an ambitious target. Other countries have already reached this level and will aim at a higher level of ambition. Nil deaths and injuries represent the extreme level of ambition and is based on the belief that any level of serious trauma arising from the road transport system is unacceptable. This view is expressed most formally in the road safety policies of the Netherlands and Sweden known as Sustainable Safety and Vision Zero respectively, both of which are examples of a Safe System strategy. This approach is common in other transport systems and has determined safety programmes in aviation, rail and shipping for several decades.”[[9]](#footnote-9)

«Road safety performance levels particularly, in countries with lower levels of road safety performance, can be improved in the short term by implementing a battery of proven measures. A survey conducted for this report (OECD 2006-1) asked leading road safety practitioners to identify the main risks in their country». [[10]](#footnote-10) The key measures to be implemented: speed management, reduced drunk-driving, seatbelt use, safer roads and roadsides, enhanced vehicle safety and reduced young driving risks.

In 2008, the ITF published a report titled "Speed and Crash Risk", which drew attention to the role of speeding in road traffic deaths. The report highlighted the correlation between speed and the likelihood of a crash, as well as the severity of injuries sustained in crashes that involved speeding. It also emphasized the importance of implementing effective speed management measures, such as speed limits and traffic calming measures, in order to reduce the number of fatalities and injuries caused by speeding. The report called on governments to prioritize road safety and take action to reduce speed-related crashes. The release of this report by the ITF helped to raise awareness about the importance of addressing speeding as a key factor in road traffic deaths and injuries.

The study investigated how changes in speed restrictions or the widespread use of automatic speed cameras affected the performance of ten countries in terms of road safety. All of the cases showed a significant correlation between crash frequency and speed: There were more collisions and fatalities when the mean speed increased. Lessening was linked to fewer collisions and casualties. In no instance did a rise in mean speed correspond to a decline in collisions or fatalities. These findings support the body of research showing that both the frequency and seriousness of traffic accidents are directly influenced by speed.

These findings support the body of research showing that both the frequency and seriousness of traffic accidents are directly influenced by speed. An increase in average speed is directly related both to the likelihood of a crash occurring and to the severity of the consequences of the crash. For example, every 1% increase in mean speed produces a 4% increase in the fatal crash risk and a 3% increase in the serious crash risk. «The death risk for pedestrians hit by car fronts rises rapidly (4.5 times from 50 km/h to 65 km/h). In car-to-car side impacts the fatality risk for car occupants is 85% at 65 km/h»[[11]](#footnote-11) **.**

The report recommended to:

* reduce the speed on roads as well as speed differences between vehicles;
* set speed limits based on the Safe System principles, i.e. at a level that humans can survive without dramatic consequences in case of a crash;
* introduce compensation measures where speed limits are increased; for instance, stricter enforcement or a safety upgrade of the road infrastructure;
* use automatic speed control to effectively reduce speed.

Working towards a Safe System, the authors proposed as reasonable speed limits:

* 30 km/h in built-up and residential urban areas where motorised vehicles and vulnerable road users share the same space;
* 50 km/h in other urban areas with intersections and high risk of side collisions;
* 70 km/h on rural roads without a median barrier and a risk of head-on collisions[[12]](#footnote-12)**.**

The report also notes that lower driving speeds generally improve citizens’ quality of life, especially in urban areas, reduce emissions, fuel consumption and noise, which all together makes them more livable.

Following a review of the research on the connection between speed and crash risk, this report examined eleven instances from ten different countries where speed limits had recently altered or automatic speed controls had been widely implemented. The investigation proved that there is a very strong correlation between speed and crash risk and that both the frequency and seriousness of traffic accidents are enhanced with greater speeds.

Speed has a direct influence on crash occurrence and severity. With higher driving speeds, the number of crashes and the crash severity increase disproportionally. With lower speeds the number of crashes and the crash severity decrease. This relationship has been captured in various models, most notably Nilsson’s “Power Model”. This shows that a 1% increase in average speed results in approximately a 2% increase in injury crash frequency, a 3% increase in severe crash frequency, and a 4% increase in fatal crash frequency. Thus, reducing speed by a few km/h can greatly reduce the risks of and severity of crashes.[[13]](#footnote-13)

Today, International Transport Forum is A 64-nation international organization, the at the OECD. It organizes the Annual Summit of Transport Ministers and serves as a think tank for transportation policy. The only worldwide organization that addresses all transport modes is ITF. The ITF is politically independent but administratively connected with the OECD. They publish a report every year. Since its debut in 2008, the International Transport Forum Annual Summit has established itself as the premier international gathering on transport policy. To discuss strategic concerns and synchronize viewpoints, it brings together transport ministers, CEOs, heads of international organizations, and thought leaders. The "Davos of Transport" is an annual gathering in Leipzig, Germany, with more than 1400 attendees from more than 80 nations.

The International Transport Forum advocates for transportation laws that enhance peoples' quality of life. Their goal is to increase public awareness of transportation policy and to create a deeper knowledge of the role that transportation plays in social inclusion, environmental sustainability, and economic prosperity. The International Transport Forum holds an annual summit in Leipzig, Germany, where experts and policymakers come together to discuss pressing issues in transport and mobility. In addition to the summit, The International Transport Forum produces a variety of reports each year, including country-specific reports that provide detailed information on transport policies, performance, and trends in member countries. These reports are highly detailed and provide valuable insights for policymakers, researchers, and other stakeholders. As an intergovernmental organization, The International Transport Forum brings together key decision-makers in transport policy, including transport ministers and other senior officials, to develop solutions to global transport challenges. Through its work, The International Transport Forum aims to promote sustainable transport and mobility, reduce emissions and congestion, and improve safety and security for all.

## 1.2 the United Nations Family and road safety

The United Nations (UN) was founded in 1945 as an international organization with the primary goal of promoting peace, security, and cooperation among nations. he United Nations (UN) has been involved in road safety initiatives since its early years. In 1949, the UN Economic and Social Council (ECOSOC) established the United Nations Economic Commission for Europe (UNECE) to promote economic cooperation and development in the region. In 1953, UNECE adopted the first UN Convention on Road Traffic (drafted in 1949, Geneva), which established uniform regulations for traffic on international highways.

The United Nations (UN) road safety instruments provide a strong basis for countries to establish their own legal and regulatory frameworks and systems that facilitate road safety and international vehicle movements. They include: the 1949 Road Traffic Convention was the first worldwide agreement on road traffic regulations. It established fundamental principles and norms for traffic on international highways, such as speed limits, traffic signs, and signals. In addition, the Convention established a framework for the mutual acceptance of driver’s licenses issued by different countries. The 1968 Road Traffic Convention was a reform of the 1949 Convention that modified the restrictions to reflect advances in technology and driving practices. It imposed new regulations on car belts, kid restraints, and motorcycle helmets. The Convention also established the principle of mutual recognition of driver’s licenses issued by various countries, as well as measures governing the transportation of dangerous commodities by road. The 1997 Agreement Concerning the Adoption of Uniform Conditions for Periodical Technical Inspections of Wheeled Vehicles was a UN agreement that aimed to establish common standards for the periodic technical inspections of vehicles. The agreement was adopted by the UN Economic Commission for Europe (UNECE) and was designed to improve road safety and reduce the environmental impact of vehicles by ensuring that they meet certain technical and safety standards. The agreement set out the frequency and scope of vehicle inspections, as well as the qualifications required for inspectors and the procedures for issuing inspection certificates. The 1957 Agreement Concerning the International Carriage of Dangerous Goods by Road was another UN agreement that aimed to regulate the transport of dangerous goods by road. The agreement established a common framework for the transport of hazardous materials, including provisions for the labeling, packaging, and handling of dangerous goods. It also established rules for the construction and operation of vehicles used for the transport of hazardous materials, and set out the responsibilities of carriers, consignors, and other parties involved in the transport of dangerous goods. The agreement has been updated several times over the years to reflect changes in technology and the increasing complexity of international trade.

All of these agreements have been widely adopted by countries around the world and have contributed to improving road safety and regulating the transport of hazardous materials. They played a crucial role in establishing common standards for road safety that have helped to reduce road traffic deaths and injuries worldwide and reflect the UN's commitment to promoting international cooperation and establishing common standards to address global challenges.

In the 1990s, the United Nations (UN) started to focus on road safety as a global public health issue. In 1993, the UN General Assembly adopted a resolution declaring a "World Day of Remembrance for Road Traffic Victims" to raise awareness about the impact of road traffic crashes on families and communities. The World Health Organization (WHO) also began working on road safety initiatives and established the Global Road Safety Partnership (GRSP) in 1999 to promote public-private partnerships for road safety. Additionally, the UN Economic and Social Council established the Commission for Global Road Safety in 1999, which worked to raise awareness about road safety issues and promote action on road safety. These initiatives marked the beginning of the UN's efforts to address road safety as a critical global health issue.

An extraordinary event on the way to uniting the efforts of the world community in solving this problem was the creation in 2004 of the United Nations Road Safety Cooperation (UNRSC), the leading role in which is assigned to the World Health Organization (WHO), and its deputies alternately become the UN regional commissions.[[14]](#footnote-14) Since 2009, WHO has since published reports on the state of road traffic safety worldwide, which assess measures and results to reduce road traffic deaths in different countries.[[15]](#footnote-15)

Russian Federation Offered to Host UN Ministerial in Moscow Russia has the worst road safety performance of the G8. Their fatality rate per 100,000 in 2007 (social risk) was 23.3 [[16]](#footnote-16) (UK’s rate was 5 and Germany’s rate was 6 ). It was more than 4 times likes to die in a traffic accident in Russia, than in these countries. In 2006 Lord Robertson visited Moscow and met with Vice Premier Alexander Zhukov. After further discussions with General Viktor Kiryanov (Head of Road Safety Inspectorate, GIBDD) and Ambassador to UK Yuri Fedotov in September 2007 the Russian Federation offered to host the proposed UN Ministerial in Moscow in November 2009.

UN General Assembly Approves First Ever Ministerial Conference on Road Safety In March 2008 the UN General Assembly debates road safety and Resolution 62/244 drafted by the Sultanate of Oman is unanimously approved which welcomes the offer by the Russian Federation to host the “first high level (ministerial) conference on road safety”. The Russian Federation confirms Moscow will be the venue and 19-20 November 2009 as the provisional date. The Make Roads Safe petition target is reached and presented to UN Secretary General Ban Ki-moon by Lord Robertson, Michelle Yeoh, Karla Gonzalez.[[17]](#footnote-17)

Thus on 19-20 November 2009 the Government of the Russian Federation had the privilege of hosting the First Global Ministerial Conference on Road Safety. At the request of the UN General Assembly, the event was a historic opportunity to make progress in tackling one of the leading causes of death and disability: road traffic crashes. 1,500 participants, including ministers, representatives of UN agencies, civil society organisations and private companies, attended the meeting, which was opened by President Dmitry Medvedev. The aim of the conference was to produce a collective document that would set out priorities in the fight against increasing road casualties around the world, common approaches for all countries and the most effective methods to improve the situation on the roads. The culmination of the meeting was the adoption of the Moscow Declaration[[18]](#footnote-18) which called upon the UN General Assembly to proclaim a Decade of Action for Road Safety 2011-2020.[[19]](#footnote-19)

General Assembly resolution 64/255[[20]](#footnote-20) 1 of March 2010 proclaimed 2011–2020 the Decade of Action for road safety, with a global goal of stabilizing and then reducing the forecasted level of global road fatalities by increasing activities conducted at national, regional and global levels. Resolution 64/255, requested the World Health Organization and the United Nations regional commissions, in cooperation with the United Nations Road Safety Collaboration and other stakeholders, to prepare a Plan of Action for the Decade as a guiding document to support the implementation of its objectives. In addition, Resolution 64/255 invited the World Health Organization and the United Nations regional commissions to coordinate regular monitoring, within the framework of the United Nations Road Safety Collaboration, of global progress towards meeting the targets identified in the plan of action through global status reports on road safety and other appropriate monitoring tools.[[21]](#footnote-21)

The reason for convening such a representative forum was the international community's awareness of the fact that the situation on the planet's roads was becoming a disaster. The experts of the World Health Organization in their report equated it to the threat of a global epidemic and gave grim forecasts for the future.

The Moscow Declaration recognized that road safety is a new priority for sustainable development; that a solution to the global road safety crisis can only be achieved through multi-sector collaboration and partnership between all stakeholders in both the public and private sectors, with the involvement of civil society; that global results are the result of national and local responses; and that effective action to improve global road safety requires a strong political commitment to action. The road safety crisis can only be realized through multisectoral cooperation and partnership among all stakeholders in both the public and private sectors, with the participation of civil society. Finally, global results are a consequence of national and local measures, and effective actions to improve global road safety require strong political will, commitment and resources at the national and subnational, regional and global levels.

The Russian Federation's Chief State Inspector of Road Safety, Victor Kiryanov, called upon the UN General Assembly to declare the period 2011-2020 as the "Decade of Action for Road Safety", during which States and the international community would need to undertake a range of additional measures aimed at preserving the lives and health of road users. «The proposals for our action on road safety in the short term will help to refine our plans for action in this area»[[22]](#footnote-22), - said he.

The Decade of Action for Road Safety 2011-2020 set an ambitious target for the global community and countries: to reduce the number of deaths due to road accidents by 50% by 2020. The road safety crisis can only be realized through multisectoral cooperation and partnership among all stakeholders in both the public and private sectors, with the participation of civil society. «Finally, global results are a consequence of national and local measures, and effective actions to improve global road safety require strong political will, commitment and resources at the national and subnational, regional and global levels.»[[23]](#footnote-23) After two years of implementation of the Decade of Action, some progress has been made and the overall increase in road traffic fatalities has stopped. According to the WHO Global status report on road safety, the total number of road traffic fatalities from 2007 to 2013 has remained unchanged at around 1.25 million.” [[24]](#footnote-24) «In 2013, 84 countries experienced an increase in road traffic fatalities, 80 countries achieved a reduction. Despite 3% population growth and 16% increase in motorization worldwide, road traffic fatalities have reached a plateau». [[25]](#footnote-25)

Six years after the conference in Moscow, Brazil hosted the Second Global High-Level Conference on Road Safety, 2015, followed by the Brasilia Declaration[[26]](#footnote-26), recognizing the importance of capacity building and continued international cooperation, including the promotion of trilateral cooperation, including among countries sharing cross-border roads, to further support efforts to improve road safety, particularly in developing countries, and provide financial and technical support. [[27]](#footnote-27) The document welcomed the inclusion of a target, within Sustainable Development Goal 3 of the 2030 Agenda for Sustainable Development, to "by 2020, halve the number of global deaths and injuries from road traffic accidents."[[28]](#footnote-28) The SDG 3.6 was among a few others that had a deadline of 2020, not 2030 as most of the SDGs.

The 3rd Ministerial Conference was held in Stockholm in 2020. The 3rd Global Ministerial Conference on Road Safety was attended by 1700 delegates from 140 countries, including more than 70 ministers and deputy ministers, as well as heads of international agencies, civil society organisations, foundations and private companies. The conference, organised at the request of the UN General Assembly by the Government of Sweden in collaboration with WHO, focused on the theme 'Achieving the Global Goals 2030', highlighting the linkages between road safety and the achievement of other sustainable development goals. The Ministerial Conference concluded with the adoption of a forward-looking 'Stockholm Declaration', which calls for a new global target to reduce road traffic deaths and injuries by 50% by 2030[[29]](#footnote-29). It recognized that SDG 3.6, proclaimed in Brasilia declaration and the Decade of Action for road safety 2011-2020 would not be achieved by 2020 and that significant progress would only be possible through national political leadership, global cooperation, evidence-based implementation. The new target for the Decade of Action for road safety 2021-2030 was the same: reduce traffic fatalities by 50%.[[30]](#footnote-30) It also called for intensified efforts in all five pillars of the Global Plan for the Decade of Action: improving road safety management; making roads, vehicles and people safer; and strengthening post-crash care. It also calls for an accelerated shift to safe, affordable and sustainable modes of transport, such as walking, cycling and public transport. The three declarations have no legal force, but are a benchmark to which all countries should aspire.

An important step towards the global goal of halving road traffic fatalities was the creation of the United Nations Road Safety Fund. The creation of the United Nations Road Safety Fund (UNRSF) was declared in Resolution A/RES/72/271[[31]](#footnote-31) of the United Nations General Assembly on April 12, 2018. This resolution was passed during the Third Global Ministerial Conference on Road Safety held in Stockholm, Sweden, which brought together stakeholders from around the world to discuss and address road safety issues. Their mission is to fund and attract further funding for high impact projects based on established and internationally recognised good practice that improve road safety and minimise and ultimately eliminate road traffic injuries for all road users.

By adopting UN General Assembly Resolution A/RES/74/299 'Improving Global Road Safety' in 2020, governments reaffirmed their commitment to the 2030 Agenda for Sustainable Development, proclaimed the period 2021-2030 as the Decade of Action for Road Safety and set a target of reducing road traffic deaths and injuries by at least 50%[[32]](#footnote-32) by 2030.

The most recent document adopted by the UN was the political declaration of the High Level Meeting on Improving Global Road Safety «The 2030 horizon for road safety: securing a decade of action and delivery». The Declaration emphasizes the importance of strengthening international cooperation in raising awareness and addressing road safety issues, welcomes the development of a Global Plan for the Second Decade of Action for Road Safety 2021-2030, should be supported by sharing good practice and effective implementation mechanisms and providing appropriate technical support to support and facilitate the accelerated achievement of all road safety-related Sustainable Development Goals.

The Universal Declaration of Human Rights recognizes the right to life of every human being. Yet 1.35 million people, including more than 182,000 children, die on the world's roads every year. Most of these deaths and injuries are preventable. Road safety is a critical issue for both sustainable development and human rights.

To date there is no international instrument that offers a 'magic pill' for achieving the goal of a 50% reduction in road deaths by 2030. The global community is paying attention to the problem with all its might, and the UN is funding various projects. First and foremost, national and municipal governments must be prepared to work with the problem.

In conclusion, the history of the global road safety agenda reveals the efforts of various international organizations and initiatives to address the issue of road crashes and fatalities. The International Transport Forum (ITF) has played a key role in advancing road safety research and policy development since its establishment in 2006. The ITF has been actively involved in promoting road safety through its annual Road Safety Reports, which provide comparative analysis of road safety policies and performance across different countries. Additionally, the ITF has been instrumental in launching several initiatives, such as the Zero Road Deaths and Serious Injuries initiative, aimed at reducing road fatalities and injuries globally.

Furthermore, the United Nations has also been actively involved in promoting road safety through its various initiatives, including the establishment of the United Nations Road Safety Collaboration (UNRSC) and the adoption of the Decade of Action for Road Safety 2011-2020. These efforts have contributed significantly to raising global awareness on the issue of road safety and the need for concerted action at national and international levels to address the problem.

Overall, the history of the global road safety agenda highlights the importance of international cooperation and coordination in tackling the issue of road crashes and fatalities. The next chapter will focus on the current state of global road safety and the challenges and opportunities for achieving the targets of the Sustainable Development Goals (SDGs) related to road safety.

# Chapter 2. Road safety and the UN Sustainable Development Goals

## 2.1 Road Safety and the Sustainable Development Goals

According to the World Health Organization «Road traffic crashes result in the deaths of approximately 1.3 million people around the world each year and leave between 20 and 50 million people with non-fatal injuries. More than half of all road traffic deaths and injuries involve vulnerable road users, such as pedestrians, cyclists and motorcyclists and their passengers.

The young are particularly vulnerable on the world’s roads and road traffic injuries are the leading cause of death for children and young adults aged 5–29. Young males under 25 years are more likely to be involved in road traffic crashes than females, with 73% of all road traffic deaths occurring among young males in that age. Developing economies record higher rates of road traffic injuries, with 93% of fatalities coming from low- and middle-income countries.»[[33]](#footnote-33) «Worldwide, nearly 220,000 children and adolescents aged 0–19 years die annually due to road traffic injuries. That is more than 600 preventable road deaths among children and young people each day – or a death almost every two minutes.»[[34]](#footnote-34)

Road traffic accidents not only result in human suffering but also place a significant financial burden on victims and their families due to medical expenses for the injured and lost productivity of the deceased or crippled. In general, road traffic accidents have a negative influence on national economy, costing nations 3% of their yearly Gross Domestic Product[[35]](#footnote-35).

Measures proven to reduce the risk of road traffic injuries and deaths exist and the 2030 Agenda for Sustainable Development has set ambitious targets for reducing road traffic injuries». [[36]](#footnote-36)

in 2004 the World Health Organization conducted a study on Future trends in mortality and burden of disease worldwide and at the regional level, called "Projections of Global Mortality and Burden of Disease from 2002 to 2030". The study included various health outcomes such as communicable diseases, non-communicable diseases, injuries, and others. In terms of road safety, the study provided projections for deaths and disabilities caused by road traffic accidents for the period from 2002 to 2030.

The study highlighted the need for urgent action to address the burden of disease and mortality caused by road traffic accidents, particularly in low- and middle-income countries. The projections showed that without effective interventions, deaths from road traffic accidents would continue to increase in the coming years. «The projected 40% increase in global deaths due to injury between 2002 and 2030 are predominantly due to the increasing numbers of road traffic accident deaths, together with increases in population numbers more than offsetting small declines in age-specific death rates for other causes of injury. Road traffic accident deaths are projected to increase from 1.2 million in 2002 to 2.1 million in 2030, primarily due to increased motor vehicle fatalities associated with economic growth in low- and middle-income countries.»[[37]](#footnote-37) Looking at the latest «Global status report on road safety»[[38]](#footnote-38), released in 2019, the number of deaths in 2018 was 1.35 million[[39]](#footnote-39), an increase of 12%, and it applies primarily to low- and middle-income countries. However, it is also a concern in richer and more developed countries. In the USA, for example, from 1990 to 2019, traffic fatalities fell by only 16%[[40]](#footnote-40), indicating the big issues and challenges facing state and city governments.

Transforming our world: the 2030 Agenda for Sustainable Development, also known as the Sustainable Development Goals (SDGs), is a global action plan adopted by the United Nations General Assembly in September 2015, which was adopted by world leaders at the UN Summit in September 2015 (Resolution 70/1[[41]](#footnote-41)). The agenda is a follow-up to the Millennium Development Goals (MDGs) and is composed of 17 interconnected goals and 169 targets, covering economic, social, and environmental dimensions of sustainable development, and entered into force in 2016. The Sustainable Development Goals are a call to action for all countries of the world, regardless of their level of development, economic or other factors. he Sustainable Development Goals s are closely aligned with the principles of human rights, including the right to education, health, gender equality, clean water and sanitation, and decent work, among others. The Sustainable Development Goals aim to address the root causes of poverty, inequality, and social injustice, which are often violations of human rights. In this way, the Sustainable Development Goals and human rights are intertwined and complementary, as the realization of one depends on the other.

Road safety is one of the Sustainable Development Goals identified in Sustainable Development Goal 3, "Ensure healthy lives and well-being for all at all ages. In addition, Sustainable Development Goal 11 also includes a goal for safe, resilient and sustainable cities and communities. Both goals are directly related to road safety and encompass many aspects related to improving road safety, such as infrastructure, transportation, education, and public awareness. Road safety is closely linked to SDG 11, which aims to make cities and human settlements inclusive, safe, resilient, and sustainable. SDG 11 focuses on creating safe and sustainable urban transport systems that prioritize walking, cycling, and public transport over private cars, as well as improving road safety measures to reduce the number of traffic fatalities and injuries. In particular, target 11.2 of SDG 11 calls for access to safe, affordable, accessible, and sustainable transport systems for all, with special attention to the needs of those in vulnerable situations, such as pedestrians, cyclists, and people with disabilities. Road safety measures, such as improved infrastructure, speed limits, and public awareness campaigns, are key to achieving this target and making transport systems safer and more accessible for all.

While road safety is certainly an important aspect of SDG 11, which aims to make cities and human settlements inclusive, safe, resilient, and sustainable, it is mainly linked to SDG 3: Good health and well-being. The reason for this is that road traffic injuries are a leading cause of death and disability worldwide, particularly among young people, which directly impacts the achievement of SDG 3. By focusing on SDG 3, countries and organizations can prioritize efforts to reduce road traffic injuries and fatalities, improve emergency response systems, and strengthen healthcare and rehabilitation services for those who have been injured in traffic accidents. Ultimately, progress towards SDG 3 and road safety go hand in hand as they both seek to improve the health and well-being of individuals and communities.

The Brasilia Declaration itself welcomed "the inclusion of a target, within Sustainable Development Goal SDG 3 of the 2030 Agenda for Sustainable Development, to "by 2020, halve the number of global deaths and injuries from road traffic accidents"[[42]](#footnote-42) while the vast majority of targets have a 2030 deadline. Agenda 2030 has taken the goal of halving the number of deaths and injuries from traffic accidents set by the Moscow Declaration and the First Decade of Road Safety.

In the Stockholm Declaration[[43]](#footnote-43), adopted at the conclusion of the Third Global Ministerial Conference on Road Safety, Ministers and heads of delegations, and representatives of international, regional and sub-regional governmental and non-governmental organisations and the private sector, meeting in Stockholm on 19-20 February 2020, recognised that SDG 3.6 will not be achieved by 2020 and that significant progress would only be possible through national political leadership, global cooperation, evidence-based implementation

Road safety is also mentioned under SDG 11 on Harmonious Cities and Communities. Target 11.2 sets out the need to ensure access to safe, affordable and reliable transport systems for all by 2030, improving road safety, especially by expanding the public transport network, paying particular attention to the needs of people in vulnerable situations: women, children, people with disabilities and older people.

«To prevent road traffic injuries, States need to address road safety through a comprehensive approach that addresses a wide range of sectors, such as transport, health, education, economic development, and also requires the implementation of measures to improve the safety of roads, vehicles and road users. Consequently, there is an urgent need to scale up evidence-based interventions and investments.»[[44]](#footnote-44)

There are many co-benefits of making road safe for active travel. One significant co-benefit is that active travel, such as walking or cycling, can lead to improved public health outcomes. Encouraging people to use active travel modes can increase physical activity levels, which can reduce the risk of chronic diseases such as heart disease, stroke, diabetes, and certain cancers. Additionally, active travel is a sustainable and affordable mode of transportation that can reduce air pollution, which has significant environmental and public health benefits. Furthermore, promoting active travel can lead to social and economic benefits. By providing safe and accessible routes for walking and cycling, communities can increase connectivity and accessibility, making it easier for people to reach schools, workplaces, and other destinations. This can improve economic outcomes by reducing transportation costs, increasing access to job opportunities, and encouraging local businesses. Finally, promoting active travel can contribute to a more equitable and inclusive society. Many people, such as those with disabilities or those living in low-income areas, may not have access to private cars and are therefore more reliant on walking and cycling. By investing in safe and accessible active travel infrastructure, governments and communities can improve the mobility and quality of life for these groups, promoting social equity and inclusion.

The United Nations is expected to keep working on road safety, with the goal of reducing road traffic fatalities and injuries, and making roads safer worldwide to support economic and environmental growth. The Decade of Action for Road Safety 2021-2030 has set a target of decreasing road traffic deaths and injuries by at least 50%[[45]](#footnote-45) by 2030.

«If road safety is assured and relevant SDG Targets 3.64 and 11.25 are met, the potential benefits to people go beyond their personal safety. For example, a reliable road system that works efficiently and meets the transport needs of all people promotes access to education (SDG Targets 4.2 and 4.3), health (Target 3.8) and food (Target 2.1) in an equitable manner (Target 9.1). Such a system also connects all parts of the country, promoting economic, social and environmental links between urban, peri-urban and rural areas (Target 11.a).

Nevertheless, road safety cannot be achieved on its own without simultaneously addressing the other challenges identified in the 2030 Agenda. Countries that have achieved high levels of road safety have, by necessity, addressed many other issues of concern. For example, they have reduced corruption (SDG Target 16.5), ensured participatory and responsible decision-making (Target 16.7), created effective, accountable and transparent institutions (Target 16.6) and mobilized financial resources (Target 17.1). The same applies to urban sustainability (SDG 11), combating climate change (SDG 13) and addressing gender issues (SDG 5), which must be incorporated into transport planning so that sustainable and equitable solutions can be found. All of these elements contribute to effective and sustainable improvements in road safety.

Other examples could be given, but the key issue is that mobility is a major focus and for the most part this is done on the roads. Safe roads help to achieve a range of social, economic and environmental objectives as outlined in the 2030 Agenda for Sustainable Development. As indicated in the 2030 Agenda, there are several ways to achieve sustainable development. Each Member State must therefore identify the most appropriate pathway to progress, creating synergies between a range of development and environmental programmes.»[[46]](#footnote-46)

Children are indeed the most vulnerable group when it comes to road safety, not only in the UK but worldwide. According to UNICEF, approximately 500 children[[47]](#footnote-47) are killed every day in road traffic crashes around the world, and millions more are injured or disabled. Children who live in low and middle-income countries are particularly at risk, as they are more likely to walk or cycle to school due to limited access to public transport, and often lack access to safe infrastructure. More children aged 5 to 19 die in traffic accidents (169, 215[[48]](#footnote-48)) than from diarrheal diseases (156, 199[[49]](#footnote-49)) or tuberculosis (110, 561[[50]](#footnote-50)) overall. Starting around age 5, children are increasingly susceptible to injury from traffic accidents as they grow more mobile on their own.

Road safety is closely linked with human rights, as the right to life and the right to mobility are fundamental human rights. Road traffic injuries and fatalities can infringe upon these rights, especially for vulnerable road users such as pedestrians, cyclists, and motorcyclists. The SDGs are designed to be universal, meaning that they apply to all countries, regardless of their level of development. Each country is responsible for implementing the SDGs within its own national context, and progress towards achieving the goals is regularly reviewed and assessed.

The Agenda 2030 emphasizes the importance of partnerships and cooperation among governments, civil society, and the private sector in achieving the goals. The SDGs are seen as a roadmap for creating a better world for all, leaving no one behind.

The United Nations has recognized the importance of road safety as a human rights issue. In 2018, the UN General Assembly adopted a resolution on Improving Global Road Safety, which emphasized the human rights dimensions of road traffic injuries and the need for a Safe System approach. The resolution recognizes that “all human beings are born free and equal in dignity and rights” and calls for a reduction in road traffic fatalities and injuries to save lives, reduce suffering, and protect the human rights of all road users.

Furthermore, the International Covenant on Civil and Political Rights recognizes the right to life, and states that this right shall be protected by law. Road safety policies and measures that aim to reduce road traffic injuries and fatalities are therefore essential to protect this fundamental human right.

In addition, road safety can also impact other human rights such as the right to health, the right to education, the right to work, and the right to participate in cultural and social activities. Road traffic injuries and fatalities can limit people’s ability to participate in these activities and have a negative impact on their quality of life.

Therefore, it is important for governments and policymakers to recognize road safety as a human rights issue and to implement effective policies and measures to reduce road traffic injuries and fatalities and protect the human rights of all road users.

“Reducing road traffic deaths and injuries requires all of us to work together. We all have a role to play. This requires adequate regulation and investment in safe and accessible infrastructure and transport systems. This also requires access to emergency services and meaningful participation of communities in priority setting and design of infrastructure. We must also pay attention to special needs of persons with disabilities, older persons and other vulnerable groups. Together we must stand up and ensure that human rights of everyone, everywhere are protected and promoted. Road safety as a human right” [[51]](#footnote-51) – as the High Commissioner for Human Right, Michelle Bachelet, declaired.

## 2.2 Mechanisms for achieving the Sustainable Development Goals in the context of road safety

«Mobility is an integral part of almost everything we do in our daily lives. We leave our homes and enter the road system that takes us to work and school, to get food and many other places to meet our daily family and social needs. The importance of the road transport system is so great that its safety - or lack thereof - affects a wide range of basic human needs. Thus, ensuring road safety and the creation of conditions for sustainable mobility are essential to reducing poverty and reducing inequalities, improve access to employment and education, as well as to mitigate the effects of climate change. In fact, the efficiency, accessibility and safety of transport systems directly or indirectly contribute to the achievement of many of the Sustainable Development Goals. In fact, the efficiency, accessibility and safety of transport systems contribute directly or indirectly to many of the Sustainable Development Goals. on road safety itself, is limited in terms of its potential reach and impact, and are often subordinated to other social goals and needs. But if road safety is perceived to be an urgent need, the fulfilment of which can contribute to progress in other societal objectives from gender equality to environmental sustainability, the potential for The potential for action to address it can be greatly enhanced».[[52]](#footnote-52)

The Safe System approach – a core feature of the Decade of Action and a key to reaching the Sustainable Development Goal 3. The Safe Systems Approach is founded on the idea that if successful injury prevention measures are put in place, traffic fatalities can be reduced or even eliminated.

The guiding ideas behind this strategy are:

* «Individuals make mistakes.
* The human body by nature has a limited capability to sustain collision forces.
* It is a shared responsibility between all persons who interact in the road environment to take appropriate actions to ensure that road collisions do not lead to serious or fatal injuries.
* All components of the system must be interconnected to strengthen and multiply their impacts».[[53]](#footnote-53)

There are many different mechanisms that can be used to achieve the SDG target of reducing road traffic deaths and injuries. One of the most important players in this area is the World Health Organization (WHO), which has developed a range of strategies, guidelines, and tools to support countries in improving road safety. These include the Global Plan for the Decade of Action for Road Safety 2011-2020, which provides a framework for countries to implement evidence-based interventions to reduce road traffic deaths and injuries. Another important mechanism is the United Nations Children's Fund (UNICEF), which focuses on improving road safety for children. UNICEF has developed a number of tools and resources to help countries develop and implement child-friendly road safety policies and programs. The International Transport Forum is also a key player in this area, providing financing and technical assistance to support road safety initiatives in low- and middle-income countries. Finally, the Vision Zero approach, which originated in Sweden and has now been adopted by many countries around the world, is another important mechanism for achieving the SDG target of reducing road traffic deaths and injuries.

«The Global Plan describes what is needed to achieve that target, and calls on governments & partners to implement an integrated Safe System Approach. Building on the Safe System approach. The Safe System approach – a core feature of the Decade of Action – recognizes that road transport is a complex system and places safety at its core. It also recognizes that humans, vehicles and the road infrastructure must interact in a way that ensures a high level of safety». [[54]](#footnote-54)

«The following recommendations draw from proven and effective interventions and best practices for preventing road trauma and provide a comprehensive overview of actions to implement and strengthen Safe Systems. These recommendations are not prescriptive but can be used to inform the development of national road safety action plans that are tailored to local contexts, available resources and capacity».[[55]](#footnote-55) The recommendations include:

* Multimodal transport and land-use planning. (The world's increasing demand for urban mobility is expected to exceed the capacity of personal vehicles, leading to a need for investing in public transport systems such as buses, trams, and commuter trains. These systems are generally more affordable and safer than private cars and play a vital role in improving road safety, as highlighted in the Sustainable Development Goal Target 11.2. Planning for multimodal transportation systems and land use planning should take into account local conditions and climate, as well as prioritize those who do not travel by personal car, such as pedestrians, cyclists, and public transport users. Standards must be in place to eliminate or reduce potential risks to road safety and ensure safe and environmentally friendly travel opportunities for all. This can be achieved through measures such as reducing speed limits and promoting compact urban design, intermodal connectivity between transit and bike share schemes, and creating transport connections for bicycle and pedestrian travel to reduce total travel time.)
* Safe road infrastructure. The key to reducing traffic injuries is to have safe road infrastructure. This infrastructure should support different modes of transportation such as carpooling, public transport, walking, and cycling while removing dangers for all users, especially vulnerable ones. Managing speed is crucial, and road infrastructure must be designed to be logical and intuitive to ensure the safety of all road users. Accessibility should also be considered, including for people with disabilities, and it should be easy to transfer from one mode to another. Standards for safety components have been developed globally and regionally and can be used by countries to develop their own standards. Achieving this may involve crash-risk mapping, implementing infrastructure treatments, reviewing and updating legislation and local design standards, and considering the needs of all road users. For example, urban centres should have a speed limit of 30 km/h, rural roads should be ≤80 km/h, and expressways should be 100 km/h.[[56]](#footnote-56)
* Vehicle safety (The safety of drivers, passengers, and pedestrians is a crucial aspect of vehicle design. Vehicles should be equipped with functional elements that can avoid collisions or reduce the risk of injury in case of a crash. However, the extent to which safety features are implemented varies from country to country. The UN Vehicle Regulations Agreements[[57]](#footnote-57) were developed to help establish safety standards for vehicle manufacture and components, as well as for periodic technical inspections. Governments should establish mechanisms for periodic evaluation of vehicles to ensure that all new and in-use vehicles comply with safety regulations, including safety belts, child-restraint systems, and motorcycle helmets.)
* Safe road use. (To reduce road traffic injuries and deaths caused by speeding, driving under the influence, driver fatigue, inattentiveness, and lack of safety equipment use, legislation, enforcement, and outreach should consider these behavioral factors. The design of road infrastructure and safety systems in vehicles can also influence road user behavior. Laws must be enforced with appropriate penalties and backed by message-tested communications to ensure compliance. Measures such as restricting phone use while driving and setting speed limits can help improve road safety.)
* Post-crash response. Time is of the essence in post-crash care and survival; delays of minutes can be the difference between life and death. As soon as possible after a crash, adequate, integrated, and coordinated treatment should be given for this reason. An alert system (such as a single universal access call number) connected to relevant professionals is one mechanism to ensure the right course of action is taken. These professionals can then quickly dispatch the appropriate emergency services with trained personnel and the necessary equipment via ambulances or occasionally helicopters, as needed.

The 2030 Action Plan for Road Safety[[58]](#footnote-58) is a comprehensive approach to reducing road traffic injuries and fatalities by implementing a safe system approach. It recognizes that road safety is not just the responsibility of individual road users, but also of the transportation system as a whole. The plan emphasizes the importance of multimodal transport and land-use planning that prioritizes pedestrians, cyclists, and public transport users, and the implementation of safe road infrastructure that supports different modes of transportation and removes dangers for all users. The plan also emphasizes the need for vehicle safety through the implementation of safety standards and periodic technical inspections. Safe road use can be achieved through legislation, enforcement, and outreach, while post-crash response should be prompt and effective to ensure that adequate and coordinated treatment is given as soon as possible after a crash. By implementing these measures, we can move closer to achieving the Sustainable Development Goal Target 3.6 of halving the number of global deaths and injuries from road traffic accidents by 2020 and achieving a more sustainable and safe transportation system for all.

These measures can be supplemented by the UNICEF strategy, Technical Guidance for Child and Adolescent Road Safety[[59]](#footnote-59), which focuses on reducing road traffic injuries and fatalities among children by improving road safety policies, interventions, and research. «UNICEF is committed to engaging in road safety as part of its new strategic plan to address the leading cause of death for children and adolescents aged 5–19 years. This is aligned with UNICEF’s aim to support the Sustainable Development Goals (SDGs), the United Nations (UN) Decade of Action for Road Safety 2021–2030 and UNICEF’s new initiative ‘Healthy Environments for Healthy Children’. Reducing child road traffic injuries will help achieve many of the SDGs, in particular SDG Target 3.6, to decrease global road deaths and injuries by 50 per cent and SDG Target 11.2 to provide access to safe, affordable and sustainable transport for all by 2030».[[60]](#footnote-60) The UNICEF Child and Adolescent Road Safety Technical Guidance 2022 provides several measures that can be taken to reduce children's deaths on roads. Here are some of the main measures:

* Improve road infrastructure: This includes implementing traffic calming measures, such as speed humps, traffic circles, and chicanes, as well as designing pedestrian-friendly infrastructure, such as sidewalks, footpaths, and safe crossings.
* Encourage safe road use: This includes promoting and enforcing safe road behaviors, such as wearing helmets and seatbelts, avoiding distracted driving, and driving at safe speeds.
* Promote safe transport options: This includes promoting public transport, cycling, and walking as safe alternatives to private cars, particularly for short trips.
* Ensure safe vehicle design: This includes requiring the use of child restraint systems, such as car seats and booster seats, and implementing vehicle safety standards, such as electronic stability control and anti-lock brakes.
* Improve post-crash care: This includes providing timely and effective emergency response services, as well as ensuring access to quality healthcare for those injured in road crashes.
* Engage and empower communities: This includes working with communities to increase awareness and understanding of road safety, and empowering children and young people to be advocates for safe road use.

These measures are all important components of a comprehensive approach to reducing children's deaths on roads.

In addition to The Global Plan the WHO has also developed law indicators[[61]](#footnote-61) for road safety. They are a good framework for road safety as well as data on countries, which reflect the state of legislation and law enforcement in each state. They include:

**Drinking laws.** WHO evaluated drink-driving laws using the following criteria: the general population's BAC limit is 0.05g/dl[[62]](#footnote-62) or less, according to the law; the legal limit for drivers who are young or inexperienced is 0.02 g/dl[[63]](#footnote-63). A good drink-driving law is one that satisfies both requirements. Alcohol consumption can impair driving at extremely low levels, and the danger increases exponentially as consumption increases, especially after the blood alcohol concentration (BAC) exceeds 0.05 g/dl[[64]](#footnote-64) (grams per deciliter). Compared to older and more experienced drivers, young and inexperienced drivers are far more likely to be involved in a road traffic accident when under the influence of alcohol.

**Speeding laws.** WHO evaluated laws governing speed using the following standards: in urban areas, the speed limit is 50 km/h[[65]](#footnote-65) or less, local governments are permitted by law to change federal speed limits. Countries with good speed laws are those that satisfy both requirements. The faster the speed, the more likely a crash will occur.

**Laws on wearing a helmet.** All riders (drivers and passengers), on all highways, and with all engine types are required by law to wear helmets. The law must also make it clear that the helmet must be securely attached. Law alludes to a helmet requirement. Correct motorcycle helmet use can lower the risk of mortality by more than 40%[[66]](#footnote-66) and the risk of serious injury by over 70%[[67]](#footnote-67).

**Seat belt laws.** WHO evaluated seatbelt law according to the following standards: drivers and front-seat passengers must abide by the law; rear seat passengers are subject to the law. A good seat belt wearing law is one that satisfies both of the criteria. «Wearing a seat-belt can reduce fatalities among front-seat occupants by up to 50% and among rear-seat car occupants by up to 25%».[[68]](#footnote-68)

**Child restraints.** WHO evaluated child restraint regulations using the following standards: children must utilize a kid seat until they are 10 years old or 135 cm, according to the law; a standard for child restraints is mentioned in law; children under a specific age or height are prohibited by law from occupying the front seat. A good child restraint law is one that complies with these standards.

**Vehicle standards**. The eight international standards accepted as basic minimum standards for vehicle manufacture/assembly, as mentioned in the WHO global status on road safety 2018, include: Seat Belts: to be installed in all vehicles and their proper use by occupants; standards for child safety seats and restraints to protect young passengers; standards related to vehicle design and structure to enhance occupant protection during frontal collisions. standards to minimize the risk of injury in side-impact collisions, focusing on vehicle side structures and door design; Electronic Stability Control (ESC) to enhance stability and prevent skidding, Anti-lock Braking Systems (ABS) to prevent wheel lock-up during braking; standards for motorcycle helmets, including their design, materials, and safety features, alcohol Interlocks: to prevent intoxicated individuals from starting and driving a vehicle.

The development of law indicators for road safety by the World Health Organization (WHO) is of significant importance. These indicators provide a framework for evaluating road safety laws and reflect the state of legislation and law enforcement in each country. They cover crucial areas such as drinking laws, speeding laws, helmet-wearing laws, seat belt laws, child restraint regulations, and vehicle standards. Overall, the WHO's law indicators provide a valuable tool for countries to assess their road safety legislation and enforcement efforts. By adopting and implementing these standards, countries can make significant progress in reducing road traffic injuries and fatalities, creating safer road environments for all users.

A review of strategies to reduce traffic fatalities would not be complete if Vision Zero were not mentioned. Even 11 years before the world's most important report of the International Transport Forum 2008, Sweden presented its "Vision zero" program to parliament. The aim of this approach was to completely eliminate the number of severe injuries and fatalities caused by road traffic crashes. This was a significant change from the traditional approach to road safety, which had previously focused on reducing the severity of crashes or improving the behavior of drivers. «The Vision Zero policy was adopted by the Swedish parliament in 1997 as a new direction for road traﬃc safety. The aim of the policy is that no one should be killed or seriously injured due to traﬃc accidents and that the design of the road transport system should be adapted to those requirements. Vision Zero has been described as a policy innovation with a focus on the tolerance of the human body to kinetic energy and that the responsibility for road safety falls on the system designers. In Sweden, the Vision Zero terminology has spread to other safety-related areas, such as ﬁre safety, patient safety, workplace safety and suicide.»[[69]](#footnote-69)

Vision Zero is based on two ethical principles: zero tolerance for death or serious injury, and zero tolerance for such accidents as an inevitable evil of motorization. Because of this, the program is also known as the "zero-tolerance principle. In addition, the concept places responsibility for road safety primarily on designers and builders. They are obliged to consider the human factor at the construction stage, minimizing the probability of accidents. Supposedly, "man is imperfect," he can make mistakes while driving and, as a pedestrian, tends to choose a way of moving that is safe only in his subjective opinion. In addition, planners should be concerned primarily with the safety and convenience of streets for all road users, rather than speed and convenience. Specifically, Vision Zero states that:

* + Since system designers are in charge of the development, management, and application of the road transport system, they are also in charge of the overall safety of the road network.
  + When using the road transportation system, road users are accountable for following the guidelines established by system designers.
  + «If road users fail to follow said rules due to lack of knowledge, approval or ability, or if injuries do occur, then system designers are responsible for taking further action to prevent people from being killed or seriously injured».[[70]](#footnote-70)

According to “Vision Zero”, The traffic system should separate motorists, cyclists and pedestrians or limit the speed of their movement in order to eliminate the possibility of collision of different road users. For example, on streets without sidewalks, where everyone moves in the general flow, a speed limit of 10 km/h[[71]](#footnote-71) is set and artificial bumps are created to comply with it. On streets where pedestrians can cross the street in any place, and bicycles and cars move in parallel, the limit is 30 km / h[[72]](#footnote-72). It is achieved by means of speed bumps and curves of the road. On streets with uncontrolled crosswalks it is 40 km/h[[73]](#footnote-73), because statistics show that drivers are less likely to slow down at higher speeds. Restriction is created by safety islands and roadway constrictions. On streets with intersections where the angle of intersection is 90⁰, the maximum speed is 50 km/h[[74]](#footnote-74), on roads without separation of the oncoming traffic by barriers - 65 km/h[[75]](#footnote-75). Bicycle lanes are only possible on roads with a single car lane, separate bicycle lanes are required on multi-lane roads.

Vision Zero has proven to be effective in Sweden and has now is internationally spread as an effective framework to road safety. By arguing that the majority of traffic "accidents" are actually foreseeable and avoidable rather than accidental, transportation and public health officials are now jointly responsible for enforcing road safety laws.

For all countries the key question is what can be done in immediate term, be it low, middle or high income countries. Road safety performance levels particularly, in countries with lower levels of road safety performance, can be improved in the short term by implementing a battery of proven measures. A survey conducted for the «TOWARDS ZERO: Ambitious Road Safety Targets and the Safe System Approach»[[76]](#footnote-76) report asked leading road safety practitioners to identify the main risks in their country. The report's goal was to analyze the state of the art for enhancing performance in road safety and to look at how targets might be used to increase aspiration and achieve successful implementation of road safety legislation. The project's goal is to help governments raise the bar for performance by creating more methodical approaches to traffic safety. Through a strong emphasis on results, it emphasized the institutional management reforms needed in many nations to conduct effective interventions and emphasized the business rationale for investing in road safety. The key was the Safe System Approach. The key measures to address these risks were identified as follows:

* + Speed management is a crucial aspect of road safety, with enforcement of existing speed limits providing immediate safety benefits. It is important to ensure that speed limits are appropriate for various factors such as road conditions, traffic volume, and the presence of vulnerable road users. Public awareness and support for reduced speed limits need to be fostered, as even small decreases in speed can lead to significant reductions in accidents. Infrastructure improvements and the use of technologies like intelligent speed adaptation are also essential for modifying driver behavior and enhancing speed management.
* Road safety must be increased by reducing drunk driving. In order to enforce blood-alcohol limits, best practice experiences show the need for highly visible enforcement, including random breath testing. For the general populace, these restrictions shouldn't go over 0.5g/l.[[77]](#footnote-77) Strong penalties for repeat offenders and extensive exposure are necessary for effective enforcement. Additionally, if public approval can be successfully increased, the option of installing alcohol interlocks in all automobiles may be pursued in the future. Seatbelt use: legislation with firm police enforcement backed by intensive mass-media programmes and penalties is the most effective strategy to improve seatbelt wearing. Technologies such as seatbelt reminder systems and seatbelt ignition interlocks could almost completely counter the non-wearing of seatbelts if introduced universally but would require community and vehicle industry acceptance.
* Enhancing road safety and improving road conditions: In the immediate term, it is important to implement targeted road improvements that address high-risk areas. These improvements can include measures like installing audible edge-lining, sealing shoulders, clearing vegetation along roadsides, and constructing passing lanes. However, for long-term effectiveness, it is crucial to adopt a proactive and systematic approach to road infrastructure design and maintenance. This approach ensures ongoing efforts to enhance road safety and continuously renew the road network. Enhanced vehicle safety: the safety of vehicles has increased significantly in recent years, due to technological development of passive (crash protection) and active (crash avoidance) systems. In particular, Electronic Stability Control systems represent a major recent advance in active safety, with collision avoidance and lane departure warning systems examples of other promising technologies.
* Promoting seatbelt use requires strict enforcement of legislation, supported by intensive mass-media campaigns, to raise awareness and emphasize its importance. Penalties should be implemented to deter non-compliance. Adopting technologies such as seatbelt reminder systems and ignition interlocks can greatly reduce instances of non-wearing, but their effectiveness depends on community acceptance and cooperation from the vehicle industry.
* Reduced young driver risk: graduated licensing schemes in tandem with extended training during the learner period have been effective in reducing deaths among young drivers. Components of a graduated licensing can include night-driving and peer-passenger restrictions, graduated demerit points while on probation, zero blood-alcohol content tolerance and extended learning periods while under supervision to provide for driving in a variety of road and weather conditions.

The mortality rate in road accidents is a social phenomenon, there is nothing natural about it, and the level of mortality from road accidents is directly correlated with other social indicators, such as alcohol consumption per capita, road quality, and quality of driver education. In other words, all those things that are under control or at least within the sphere of influence of the authorities.

«Legislation to address road user behaviour can be enacted at national, subnational or continental level depending on countries’ system of government. Although traffic laws are an essential part of ensuring safe road user behaviours, these laws must be enforced, and appropriate penalties issued to deter road traffic violations. Enforcement strategies should be backed up by message-tested communications to guarantee public understanding and support, and the involvement of local stakeholders to maximize compliance. Similarly, steps should be taken to prevent corruption in road safety enforcement, which undermines public support and legislative effectiveness.»[[78]](#footnote-78)

To achieve the goal of reducing road fatalities by half by 2030, significant changes in law enforcement are required. These changes include reducing speed limits and increasing fines for speeding, driving under the influence of alcohol or drugs, and neglecting the use of child seats. The right to life, health, and mobility should be upheld, and individuals and governments alike have a responsibility to take action to ensure road safety and protect these basic human rights.

Different countries have different approaches to solving the problem of road deaths. Some countries focus on improving road infrastructure. For example, Sweden, known for its Vision Zero approach, creates safe roads, including the separation of traffic flows and the introduction of speed reduction devices. This prevents possible collisions between different types of traffic. Other countries, such as Germany, emphasize the development of innovative technologies, including driver assistance systems and automatic emergency braking, to reduce the risks of accidents. Some countries are also actively making changes to their legislation. The U.K., for example, has introduced strict measures against drinking and driving, they also require drivers and passengers to use seat belts and child safety seats. However, not all countries are taking proactive measures. Some pay less attention to road safety and do not take the necessary steps to reduce road deaths. For example, some countries may have weaker legislation on speed limits, drinking and driving, or seat belt use. Moreover, people's behavior on the roads can vary significantly from country to country. Some countries may have a higher traffic culture, where drivers and pedestrians follow the rules and show mutual respect. At the same time, in some countries it may be more common to break the rules, such as speeding or ignoring traffic signals.

Since measures such as infrastructure improvements, public transport and health systems imply large investments and reasonable urban development plans that take a long time to achieve the Sustainable Development Goals, measures are needed that will contribute to a rapid reduction in road traffic fatalities, expressed in terms of social risk, number of deaths per 100000 people. Such measures may include both lowering the speed limit in urban areas, especially around schools and other sensitive locations, and include increased penalties for speeding, driving under the influence of alcohol and drugs, and other traffic offences.

Road safety is not only a matter of transportation and public health, but it is also a fundamental issue of human rights. Every person has the right to be safe and protected from harm, including on the road. The Safe System approach is one way to achieve this goal by implementing a comprehensive and integrated approach to road safety management that takes into account the human and social factors that contribute to road crashes.

# Chapter 3. Challenges and Prospects for Achieving Sustainable Development Goals in Road Safety in European Countries

## 3.1 Sweden and Vision Zero

In Sweden, at 1 313 each year, the number of traffic fatalities peaked in 1965 and 1966. Since that time, there have been 85%[[79]](#footnote-79) fewer traffic fatalities. This general upward trend can be partially attributed to infrastructure upgrades, fleet safety, increased attention to injury avoidance, and slower speeds. Road design has long embraced more great safety, and vehicle and national road safety performance measures are getting better.

In Sweden, a number of agencies are in charge of traffic safety. The Swedish Transport Agency, Transportstyrelsen, is in charge of creating legislation and making sure that governments, businesses, organizations, and individuals abide by them. The Swedish Transport Administration, Trafikverket, is in charge of constructing, running, and maintaining public roads and railroads as well as long-term planning of the transportation system for all sorts of traffic. The theoretical and practical driving examinations required to get a driver's license for both professional and private drivers are also administered by the Swedish Transport Administration. With the help of Trafikanalys, a transport analysis program, decisions are reviewed, actions are evaluated, and data are produced.

Sweden is divided into 290 municipalities and 20 county councils. Local road safety is the responsibility of these municipalities and counties. In Sweden, the local government is well established. The majority of the public services, including those related to road safety, are provided by the nation's cities, county councils, and regions. They enjoy a high degree of autonomy and separate taxing authority. The Instrument of Government, one of the four pillars of the Swedish Constitution, stipulates local self-government and the ability to charge taxes.

In October 1997, the Road Traffic Safety Bill founded on Vision Zero was passed by a large majority in the Swedish parliament. The Vision Zero is that eventually no one will be killed or seriously injured within the road transport system. The Vision is an expression of the ethical idea that «It can never be ethically acceptable that people are killed or seriously injured when moving within the road transport system.»[[80]](#footnote-80)

Vision Zero, which was introduced by the Swedish parliament in 1997[[81]](#footnote-81), long before the 2008 International Transport Forum Report, a strategic approach toward a safe system where no one is at risk of dying or suffering serious injuries while using the road transportation system, serves as the foundation of Swedish efforts to improve road safety. There isn't really a formal safety plan at all. Using the management by objectives concept, systematic work on road safety has been done. This methodology includes assessing and monitoring a number of current aspects of the road transportation system that have been linked to the trend in serious and fatal accidents. Utilizing road safety performance indicators (SPIs), these circumstances are quantified. Road fatalities, serious injuries, and SPIs have interim goals.

Vision Zero was adopted by the Swedish parliament as a new direction for road traﬃc safety. According to the decision, the long-term goal of road traﬃc safety is that no one should be killed or seriously injured as a result of traﬃc accidents in the road transport system and that the design and function of that system should be adapted to the requirements of Vision Zero. Vision Zero has been described as a policy innovation within road traﬃc safety as it diﬀers from traditional traﬃc policies with regard to a problem formulation based on scientiﬁc principles regarding injuries, its view on responsibility, its requirements for the safety of road users, and the ultimate objective of road safety work (Belin et al., 2012).

Vision Zero is internationally seen as a promising road traﬃc safety policy. This impression has been strengthened by oﬃcial statistics in Sweden showing that the number of road deaths was halved and that the number of deaths among car users decreased by 60% during 2000–2010. While the decrease has stagnated somewhat after 2010, Sweden’s roads are still among the world’s safest, with only 3 of every 100 000 Swedes dying on the roads each year, compared to 10 in the USA. The positive development of road deaths has been seen by many as proof of the policy’s eﬀectiveness. It should be noted though, that few studies show a direct cause-and-eﬀect between the Vision Zero policy as a whole and the positive development, but there are studies indicating such a connection».[[82]](#footnote-82)

«Problems can, however, arise when contemplating specific road traffic safety measures. It is not always obvious that the individual person sees the connection between a specific measure and its effect on road traffic safety in society as a whole. Lowering the speed limit is a prime example. This is often implemented to protect the most vulnerable road-users but entails all road-users making a sacrifice in the form of longer travelling times for the common good. Even if it can be presumed that every single individual places higher priority on life and good health than on saving time, the latter is more tangible and immediate. The potential for saving lives constitutes more of a theoretical concept. The higher the understanding of changes and the greater the sense of participation in the process the easier it is to accept change». [[83]](#footnote-83)

Vision Zero recognized that the traditional approach was not sufficient and that more needed to be done to prioritize the safety of all road users. Therefore, the philosophy behind Vision Zero was to shift the focus from merely reducing the harm caused by crashes to the prevention of crashes altogether.

The adoption of Vision Zero in Sweden represented a major shift in the way transportation planning and decision-making was done, with a greater emphasis on designing safer roads and prioritizing the safety of vulnerable road users such as pedestrians and cyclists. The goal of Vision Zero is to completely eliminate severe injuries and fatalities from road traffic crashes, with the belief that no loss of life is acceptable or inevitable.

With the introduction of a zero tolerance programme for road deaths, Sweden has achieved astonishing results. At its highest point in 2000, when the social risk per 100,000 people was 6.7, it has since fallen dramatically: in 2009, when the first Ministerial Conference on Road Safety was held in Moscow and the first decade of road safety was launched, the social risk was 3.9[[84]](#footnote-84) and at the beginning of the second decade the social risk of being killed in an accident was 1.97, indicating that Sweden was on track to meet the goal of reducing its casualty rate by 50%, as stated in Sustainable Development Goal 3. Today, according to the International Transport Forum, Sweden has the second-lowest[[85]](#footnote-85) number of fatalities per 100,000 inhabitants, before only Norway.

Sweden recorded their lowest‑ever number of road deaths since systematic records began. (2021). Nowadays Sweden takes second place in the rating of lowest death rate among International Transport Forum Countries. [[86]](#footnote-86)

Fines for speeding were raised in an effort to discourage dangerous driving behavior and improve road safety. Nowadays and has one of the lowest social risks of death in an accident and has quite high fines. In areas with a speed limit of 50 km / h, exceeding 1-10 km / h is punishable by a fine of 2,000 Swedish krona or 21,000 rubles. (At the exchange rate for July 2022), for 16–20 km/h – 2800 SEK. On roads with a speed limit of more than 50 km / h - 1500 and 2400 SEK, respectively. Current law sets a default speed limit of 50 km/h in urban areas, unless otherwise posted. In some areas, such as around schools and other sensitive locations, the maximum permissible speed limit is 30 km / h. The refusal of any non-administered thresholds for speeding is declared, but the error of the fixation devices is set at 3 km / h. Thanks to this program, for 20 years Sweden managed to reduce mortality on the roads by 3 times [30].

In June 2023 Sweden is hosting a conference about Vision Zero approach. A significant change occurred at the 2020 Global Ministerial Conference in Stockholm. The seminar expanded on how the United Nations 2030 Agenda, whose primary pillars are equity, health, and the environment, includes road safety as an essential component. The 2030 Agenda places a lot of emphasis on road safety not just because it is one of the goals themselves but also because it supports other social values and aspirations. More crucially, road safety is now on par with issues like global warming, equal rights, safe workplaces, etc. and has legal access to numerous procedures and resources that could hasten the steps leading to a decline in the number of fatalities on the world's roads. The sustainability goals have definite, unbreakable goals.

Despite the significant progress made with the Vision Zero program, Sweden still faces challenges in reducing road fatalities and injuries. In addition to the challenges related to Vision Zero implementation and enforcement, Sweden is facing new and emerging issues in road safety. One such issue is the increase in distracted driving, particularly due to the use of mobile devices while driving. This has led to an increase in the number of accidents caused by distracted driving.

«Sweden recorded 204 road fatalities in 2020, a 7.7% decrease on 2019 and the lowest total since 2000. It is difficult to estimate the magnitude of the impact of the Covid-19 pandemic on road safety performance in 2020. The assessment is that the pandemic reduced the outcome of the number of deaths and serious injuries in 2020, but it did not have a dramatic impact. The basis of Swedish road safety work is Vision Zero. The Swedish government set new targets for 2030, including a 50% reduction in fatalities and a 25% reduction in serious injuries based on the average for 2017-19. The Road Safety Strategy 2021-2030 is still under development. The action plan 2022-2025 will be published in April 2022 and will include 111 measures designed to increase road traffic safety.»[[87]](#footnote-87)

The Swedish Transport Administration founded the Vision Zero Academy in 2019. With the main goal of promoting awareness of Vision Zero and assisting many stakeholders around the world in their pursuit of secure road transportation systems, Vision Zero Academy is a worldwide information resource.

Another issue is the growing number of vulnerable road users, such as pedestrians and cyclists, who are at higher risk of injury or death in accidents involving motor vehicles. This has prompted the government to invest in infrastructure improvements such as pedestrian and bike lanes, as well as public education campaigns to promote safer behavior among all road users.

Finally, Sweden is also grappling with the issue of alcohol and drug-impaired driving, which continues to be a significant contributor to traffic fatalities. The government has implemented stricter penalties for drunk driving and is exploring new technologies to prevent and detect impaired driving. Fortunately, Swedish drivers are more supportive for stricter legislation on speeding and drink-driving compared to drivers in other countries.

Overall, while Sweden has made significant progress in reducing road deaths and injuries through Vision Zero, there is still work to be done to meet the ambitious goal of reducing deaths by 50% by 2030.

## 3.2 Germany and the UK as examples of steady decrease in numbers of road fatalities

Germany and the Great Britain are examples of how to effectively apply the Safe System Approach to road safety. Both countries have developed specific measures to reduce the number of deaths and serious injuries on the road, including infrastructure development, speed management, improving the quality of road transport services, raising public awareness of road hazards, and increasing penalties for traffic violations. These countries also promote the Safe System Approach internationally through their participation in the G7 and other international forums. As part of this approach, they recognize that human error plays an important role in road accidents and that the system must be designed to protect all road users. They also recognize that all the capabilities of modern technology must be used to create safe road infrastructure and motor vehicles. These measures and approaches can also be used by other countries, especially those that are developing, to reduce the number of accidents and deaths on the roads.

Germany is one of the largest countries in Europe with a population of over 83 million people. The country is known for its advanced economy, technological advancements, and high standard of living. In terms of road safety, Germany has made significant progress over the years, reducing its road traffic fatalities from over 21,000 in 1970 to around 3,000 in recent years. However, the country still has one of the highest numbers of road fatalities among European countries. One of the strengths of Germany's approach to road safety is its emphasis on infrastructure development, including road design, construction, and maintenance. The country also places a strong emphasis on speed management, with many roads having speed limits that are strictly enforced. In addition, Germany has made significant investments in improving the quality of public transport services, making it an attractive alternative to driving. Despite these strengths, Germany also faces some challenges in its efforts to reduce road traffic deaths and injuries. One issue is the relatively high number of fatalities among vulnerable road users, such as pedestrians and cyclists. This is partly due to the fact that many urban areas were designed primarily for cars, with limited infrastructure for other modes of transport. In addition, Germany has a relatively high tolerance for alcohol consumption while driving, which can contribute to road accidents.

Germany is a member of the UN and the International Transport Forum (ITF). As a member of the UN, Germany actively participates in the work of various international organizations, including the World Health Organization and other organizations dealing with road safety. Membership of the ITF allows Germany to cooperate with other countries in developing transport systems and improving road safety.

In 2009, when the first Ministerial Conference on Road Safety was held in Moscow, the road traffic mortality rate in Germany was 4,151[[88]](#footnote-88), and the social risk per 100,000 population was 5.1[[89]](#footnote-89). At that time, the Vision Zero program, which had been implemented since 2007[[90]](#footnote-90) with the support of the German Road Safety Council (DVR - Deutscher Verkehrssicherheitsrat), was already making progress in reducing the number of fatalities. By 2009, the road traffic mortality rate had decreased from 5,091 in 2006 to 4,152. The first Decade of Action for Road Safety, proclaimed at the conference and in the Moscow Declaration, aimed to reduce the number of road traffic deaths by 50% by 2020, which was later added to the Sustainable Goal 3.

The German Road Safety Council was founded in 1969. Due to the steadily growing number of road users killed and seriously injured, the then Federal Minister of Transport, Georg Leber, among others, decided that it was necessary to pool resources and develop and coordinate effective measures to make road traffic safer for all road users - the future task of the German Road Safety Council (DVR). For the German Road Safety Council, Vision Zero has been the basis of its road safety work since 2007. The goal of Vision Zero is no fatalities and serious injuries on the roads. To achieve this, a safe transportation system must be created. According to Vision Zero, this is necessary because humans, as a central component of the road traffic system, do not act without error, partly because their physical resilience is limited. Means of transport - cars, trucks, bicycles, buses, motorcycles - but also the infrastructure must therefore be designed in such a way that accidents involving fatalities and injuries are avoided. According the the German Road Safety Council, «Regulations, laws and ordinances must be adapted in line with Vision Zero. Vision Zero requires politicians to set clear priorities. The integrity of the human being must be the first priority. Life is not negotiable. Since Vision Zero became the fundamental strategy for DVR's work, quite a few DVR members have committed to it. As before, all members and partners are encouraged to act in accordance with Vision Zero and to promote its implementation».[[91]](#footnote-91) Vision Zero as a System Approach to road safety has shown its effectiveness on the German roads, but in particular areas. At the time Vision Zero was not implemented by the whole country.

According to statistics, Germany did not achieve the goal of the First Decade of Road Safety to reduce road traffic fatalities by half. By 2020, the number of road fatalities was at the level of 2,719, indicating that Germany was only able to reduce fatalities by 35 percent by the deadline since 2009. In 2010, The Road Safety Programme 2011-2020 was developed. This program was created by the German Federal Ministry of Transport and Digital Infrastructure (formerly known as the Ministry of Transport, Building and Urban Development) with the objective of reducing the number of traffic fatalities by 40%[[92]](#footnote-92) by 2020, using 2010 as the base year. « The target of having a fatality reduction of 40% compared to the 2011 level by 2020 has not been reached. The target was defined based on research regarding the expected development of road safety until the year 2020. It was established taking into account the 50% reduction target of the European Commission and the current level of road safety in Germany. There were also specific targets in individual federal states. An actual reduction in road fatalities of 24% was achieved from 2011 to 2020.»[[93]](#footnote-93) Однако необходимо отметить, что в 2010 году была разработана The Road Safety Programme 2011-2020: This program was developed by the German Federal Ministry of Transport and Digital Infrastructure (former Ministry of Transport, Building and Urban Development) with the goal of reducing the number of traffic fatalities by 40% by 2020 (base year:2010). The document provides 56 key measures on the basis of scientific evidence and the statistics on rate of accidents. One of the key measures in the programme is the focus on speeding. Speed is a major contributing factor to road accidents, and reducing speed can significantly decrease the severity of accidents and the likelihood of fatalities. The programme includes measures such as the development of speed management plans, the installation of speed cameras, and the implementation of speed limits in urban and rural areas. In addition, the programme also emphasizes the importance of road infrastructure that is designed to encourage safe driving speeds, such as the use of roundabouts and traffic calming measures.

The programme also focuses on strengthening the capacities of law enforcement agencies in Germany, providing them with the necessary tools and training to improve their ability to prevent and respond to road accidents. This includes the use of technology such as speed cameras, breathalyzers, and other tools to detect violations and enforce road safety rules. Furthermore, the programme emphasizes the importance of public awareness and education about the role of law enforcement in promoting road safety. This involves campaigns aimed at encouraging compliance with traffic rules and raising awareness about the consequences of unsafe driving practices. Overall, law enforcement is an integral part of the German Road Safety Programme, and the authorities are committed to enforcing the rules and promoting road safety through a combination of education, awareness-raising, and strict enforcement measures.

The goal of the Germany 2011-2020 Road Safety Programme was to reduce the number of road traffic fatalities by 40% compared to the 2010 level. However, by 2020, Germany was only able to achieve a 25%[[94]](#footnote-94) reduction, falling short of the target. Despite this, the programme did result in significant improvements in road safety, including a reduction in the number of fatalities and serious injuries on German roads. The measures implemented under the programme, such as speed limits, improved infrastructure, and education campaigns, contributed to this progress. In Germany, a large proportion of road fatalities occur on rural roads, which are often narrower and have less infrastructure than urban roads. This is partly due to the higher speeds that are typically driven on rural roads, as well as the fact that they often lack features such as crash barriers and street lighting. However, it is important to note that urban roads still account for a significant number of fatalities.

The Road Safety Programme 2011-2020 has been replaced by the Common strategy for road safety activities in Germany from 2021 to 2030 ("Road Safety Pact"). The pact was signed in 2021 by the Federal Ministry of Transport and Digital Infrastructure, the German Association of Cities, the German Association of Towns and Municipalities, the German Road Safety Council, and other stakeholders. The strategy includes a range of measures to improve road safety, such as increasing the use of automated driver assistance systems, implementing traffic calming measures in urban areas, improving infrastructure for cyclists and pedestrians, promoting safer and more sustainable mobility options, and strengthening law enforcement. The goal of the Strategy differs from that stated in the second Decade of Road Safety and Sustainable Development Goal 3 and aims at a 40%[[95]](#footnote-95) reduction in road fatalities. The document also declares a commitment to Vision Zero over the medium term, which speaks to the need for big changes in road safety and the willingness of the Federal Government, the federal states, local authorities and other stakeholders to work together to achieve the Strategy's goal.

Law enforcement, as noted earlier, plays a key role in ensuring road safety and achieving Sustainable Development Goal 3. Germany is known for its strict laws, as well as the quality of both the legislative and executive branches, Germany is known for its commitment to order. The minimum fine for violation of the speed limit in Germany is 20 euros. It can be obtained by exceeding the speed limit outside the city by 10 km / h. In the city, for exceeding 10 km / h, you will have to pay 30 euros, for 11-15 km / h - 50 euros, for 16-20 km / h - 70 euros. The system of scoring points for traffic offenses in Germany is designed in such a way that when reaching 8 points, the driver loses the right to drive a vehicle, you can retake the exam in six months. The non-punishable threshold is 3 km / h in zones with a maximum allowed speed of up to 100 km / h, 3% of the established speed - in zones with a limit of more than 100 km / h. According to legal indicators from the World Health Organisaton[[96]](#footnote-96) , speed limits in Germany are in accordance with those proclaimed by the Safe System Approach. Also, in Germany Good drink driving laws, where the minimum fine is 500 euros[[97]](#footnote-97) for the first offence, legal provisions regarding child seats and seat belts, vehicle stands also comply with the Safe system approach. However, In Germany, there are no nationwide laws mandating the use of helmets for cyclists.

Germany now faces the ambitious goal of halving road deaths, as dictated by the Stockholm Declaration, but Germany's goal is to reduce traffic fatalities by 40 percent, as required by the Pact.

Since 1970, Germany now has the lowest traffic fatality rate in history. Committing to a safe system approach will bring the country closer to the goal set by the Stockholm Declaration. Overall, Germany's approach to road safety, including its adoption of the Safe System Approach and Vision Zero, has been successful in reducing road traffic fatalities. However, there is still room for improvement, particularly in addressing the needs of vulnerable road users and reducing the fatalities on rural roads.

«The United Kingdom is fortunate to have some of the safest roads in the world. Currently, only seven countries have fewer road fatalities per person than the UK. But still, the human and economic cost of road collisions are vast. On average 1,700 people still lose their lives on UK roads each year and an additional 27,000 are seriously injured. The Department for Transport estimates that the total economic cost of road collisions amount to over £34 Billion each year».[[98]](#footnote-98)

The UK achieved significant success in reducing traffic deaths in the 1990s and 2000s, in part due to ambitious national government schemes like the "Tomorrow's roads: safer for everyone"[[99]](#footnote-99) national policy. These plans served as the impetus for a number of coordinated road safety interventions, such as safety awareness campaigns, infrastructure upgrades for cyclists and pedestrians, more stringent driving examinations, and greater enforcement of traffic laws.

Britain is one of the seven most developed economies in the world, known for its stability and prosperity. It also has a reputation as a leader in road safety. According to statistics, the United Kingdom ranks among the first in the world in terms of road safety. In 2021, the number of traffic fatalities in the U.K. was 1,558[[100]](#footnote-100), the lowest in 30 years. This success has been achieved through a number of measures that include increased public safety awareness, strict driving regulations, the use of the latest technology in the automotive industry and cooperation between government agencies and private companies. The first Decade of Road Safety 2011-2020, announced in 2009, saw a fairly high level of road deaths in the UK: 2,222 deaths in 2009. By the end of the announced period in 2020, the level in Great Britain had fallen to 1,460[[101]](#footnote-101), a decline of 34 percent. The 34% reduction in road deaths is impressive, and it has been achieved through a wide range of measures, including improved road infrastructure, driver training, raising public awareness, and stronger enforcement. However, while the UK has made great strides in road safety, it, like many other developed countries, still faces challenges in this area. Sustainable Development Goal 3, set by the United Nations, is to ensure healthy lives and wellbeing for all people around the world, and one important aspect of achieving this is reducing the number of deaths and injuries caused by road traffic crashes.

With the beginning of the first decade of road safety, Great Britain presented its Strategic framework for road safety. This Action Plan was developed for a five-year period and was continued with the following strategies. The 2011-2015 Action plan did not not set quantitative targets as such, but a modelling exercise was conducted to assess the expected casualty reduction outcomes framework to monitor progress on road safety, including six key, and a range of other, indicators, such as: The number of people killed or seriously injured (KSI) on the roads, The number of children killed or seriously injured (KSI) on the roads, The rate of fatalities per billion vehicle miles, The rate of serious injuries per billion vehicle miles, The number of motorcyclists killed or seriously injured (KSI) on the roads and The rate of fatalities per 100,000 population.

The 2011-2015 Action Plan was taken over by the British road safety statement in 2015, which aimed to reduce traffic fatalities by 40%[[102]](#footnote-102) by 2020, compared to the baseline average for the period of 2005-2009, and aimed to bring that figure as close as possible to zero by 2040.

While the UK did not ultimately achieve the 40% reduction target by the end of 2020, there was still significant progress made in reducing the number of road deaths and injuries during this period. According to the UK Department for Transport, there was a 34% reduction in the number of people killed or seriously injured on UK roads between 2009 and 2020, which represents over 12,000 fewer deaths or serious injuries on the roads. The UK's current road safety strategy, the Road Safety Statement 2019, does not have a specific numerical target like the 2015 statement. Instead, it focuses on a range of actions and measures to improve road safety for all road users, and is based on the principle of a safe system approach to road safety.

The key priorities to reduce traffic accidents and fatalities are:

* Adopting the Safe Systems approach.
* Protecting vulnerable road users, including pedestrians, cyclists, motor cyclists and horse riders, through infrastructure and vehicle improvements, promotion of safer behaviour and equipment and ensuring other road users are aware of the risks posed to these groups and adapt accordingly;
* Taking tough action against those who speed, exceed the drink-drive limit, take drugs or use their mobile phone while on the road and other.

The UK has a comprehensive road safety strategy that includes a range of measures to promote safer driving and reduce the number of road traffic accidents. Law enforcement is a key component of this strategy, with the police playing an important role in enforcing traffic laws and deterring dangerous driving behavior. The UK police use a variety of methods to enforce traffic laws, including speed cameras, breathalyzers for detecting drunk driving, and on-the-spot fines for offenses such as using a mobile phone while driving or not wearing a seatbelt. The police also conduct regular patrols to monitor driver behavior and respond to accidents or incidents on the roads. In the UK, violation of the speed limit for a value of up to 24 km / h is punishable by a minimum fine of 100 pounds and the accrual of 3 penalty points. The amount of the fine is determined in court and depends on the circumstances of the offense and on the amount of income of the offender. During the trial, the offender usually receives a driving ban for up to 56 days. Receiving 12 penalty points in 3 years results in the cancellation of the right to drive a vehicle. The non-punishable threshold is 10% of the set speed + 3.2 km / h (to take into ac-count the error of the speedometer). For example, in an area with a maximum permitted speed of 48 km / h, you can move with impunity at a speed of 56 km / h, and the non-punishable threshold is 8 km / h. According the World Health Organisation law indicators on road safety the UK follows all 8 vehicle standards, has good laws on helmets, speed, seat-belts and child restraints as the Safe System Approach requires. However, the drink-driving laws still need improvement: the legal blood alcohol concentration (BAC) can reach up to 0,08 g/dl, which stands out against international practice.

In conclusion, the UK has made significant progress in improving road safety over the past few decades. Despite having a high number of road traffic accidents in the past, the UK has implemented a comprehensive road safety strategy that includes a range of measures to promote safer driving and reduce the number of accidents. This strategy emphasizes a multi-faceted approach that includes law enforcement, education and awareness campaigns, as well as infrastructure improvements and technological innovations. As a result of these efforts, the UK has seen a significant reduction in road traffic accidents and fatalities over the past decade, and remains a leader in road safety among developed nations. However, there is still room for further improvement, and the UK continues to work towards achieving even greater levels of road safety through ongoing research, investment, and collaboration with other countries and organizations and is an example of a consistent policy to reduce road deaths by 2030.

## 3.3 Perspectives for achieving SDG 3 in Russia.

To monitor trends, identify problems and make recommendations, it is necessary to refer to strategies, documents, studies and events aimed at improving the road safety situation. Russia has developed several documents and strategies on road safety and reducing road deaths. On 27 October 2012, an Order of the Government of the Russian Federation approving the Concept of the Federal Target Programme "Improving Road Safety in 2013-2020"[[103]](#footnote-103) was issued. This strategy was aimed at improving road safety in Russia and reducing the number of deaths and injuries on the roads. A preliminary analysis of the results of the Federal Target Programme 'Improvement of Road Safety 2006-2012' was presented in the programme passport: the results of the implementation of the strategy show that the use of programme-specific management methods in this area has significantly improved the situation with road traffic accidents in the country. Over the five years of its implementation, the number of people killed in road accidents has been reduced by 23 per cen [[104]](#footnote-104), and social risk (number of persons killed in road accidents per 100,000 population) by 19.4 per cent, amounting to 18.6 deaths per 100,000 population ; According to the International Transport Forum, the social risk of being killed in a road accident in the Russian Federation decreased by 22.5%[[105]](#footnote-105) between 2004 and 2010. «However, despite the effectiveness of its implementation, traffic on Russia's roads remains unsafe compared to the most developed countries; in particular, per 100,000 population, almost five times as many people died in road accidents in Russia as in the Netherlands, and twice as many as in the Czech Republic, whose level of motorisation was almost two times higher than in Russia». [[106]](#footnote-106)

Implementation of the Concept of the Federal Target Programme "Improving road safety in 2013-2020" envisaged three options for co-financing from the federal budget and budgets of the constituent entities of the Russian Federation: The first option envisaged co-financing of the Programme measures in the ratio of no more than 50% at the expense of the federal budget and at least 50% at the expense of the budgets of the constituent entities of the Russian Federation and provides for reduction in the number of fatalities in road accidents by 25% n The second option contemplated co-financing of the Programme measures in the ratio of no more than 70 per cent out of the federal budget and no less than 30 per cent out of the budgets of the constituent entities of the Russian Federation and provided for a decrease in the number of fatalities in road accidents by 18.6 per cent as compared to 2010. The third option envisaged co-financing of the Programme measures at a ratio of no more than 30 per cent at the expense of the federal budget and no less than 70 per cent at the expense of the budgets of the constituent entities of the Russian Federation and provided for a reduction in the number of fatalities in road accidents by 8.2 per cent compared with 2010. It is difficult to say which funding option was eventually chosen~~.~~

In Russia, under the Federal Target Programmes (FTP)10 for 2006-2012 and 2013-2020, the planned reduction in the absolute number of road traffic fatalities was broadly in line with similar plans to reduce road traffic deaths in other countries (IRTAD 2018)." [[107]](#footnote-107). According to the International Transport Forum in 2010 the social risk was 19.5 and in 2020 it is 11.2, which indicates a significant positive shift, in terms of fatalities - reduction of 39% (26.5 thousand fatalities in 2010, 16.2 thousand in 2020), indicating that the goal set has been achieved. In general, a downward trend in the number of road fatalities can be seen, as in other European countries. However, according to the plan of the first decade of road safety to reduce road deaths by 50%, Russia has failed to meet the target set by the global community and the UN.

According to Russian researchers, this problem is an objective and natural result of the process of globalization of the modern world and one of the consequences of scientific and technological progress, in particular the rapid growth of automobilization. The study of the impact of motorization on the number of road accidents in Russia has been conducted for a number of years. Motorization is understood as "equipping the population with cars, the level of which is calculated from the average number of individual cars per 1000 inhabitants. The level of motorization, although it is related to the well-being of the inhabitants of the region, but its growth affects the accident rate on the roads." Thus, according to the level of the automobilization indicator among the regions of Russia in 2022, the highest values were noted in «the Urals - 333 cars per 1,000 inhabitants; it is slightly lower in the North-Western Federal District - 332 cars per 1,000 inhabitants.»[[108]](#footnote-108) In 2020, in 35 regions of the Russian Federation, the level of motorization was higher than the national average; with the high availability of cars was observed in the Primorsky Territory - 463[[109]](#footnote-109) cars per 1,000 inhabitants (in 2021 - 471 cars[[110]](#footnote-110)). This circumstance carries both positive and negative aspects. The positive side indicates an improvement in the country's economy, but the negative side is associated with various unfavorable outcomes, such as an increase in road accidents, traffic congestion during peak hours, and, as a result, degradation of the urban environment).

The Russian Federation, like other countries, is taking measures to reduce the number of accidents and injuries on the roads. According to the StateRoad Traffic Safety Inspectorate (GIBDD), every year you can see a decrease in the number of fatal accidents despite the increasing number of registered vehicles. So, in 2015, 23114 people died, in 2016 - 20308, 2017 - 19088, 2018 - 18214, 2019 - 16981[[111]](#footnote-111). In general, in the period from 2015 to 2020, the number of accidents in road accidents decreased by 20.8%.

The "Strategy for Road Safety in the Russian Federation for 2018-2024" notes that "domestic indicators lag far behind European ones. The number of deaths in road accidents in Russia is still significantly higher than the same number of European Union countries." Thus, according to, the risk of death in road accidents was lower in Sweden than in the Russian Federation, 5 times (2.7 dead per 100 thousand population), in Germany - 3.5 times (3.9 dead per 100 thousand population) and in the UK - 4.9 times (2.8 dead per 100 thousand population). Interestingly, the data for Sweden differ from that of the international transport forum, whose statistics show that the social risk level in Sweden was lower in 2017, at 2.51. [[112]](#footnote-112)

The "Strategy for Road Safety in the Russian Federation for 2018-2024" establishes no more than 4 fatalities per 100,000 people as a target social risk indicator.[[113]](#footnote-113) According to the "Strategy for Safety of Road Traffic 2018-2024," deaths in traffic accidents should be reduced by 3.5 times by 2024, which was also enshrined in Vladimir Putin's May Decree. If we take the average version of the Rosstat forecast for the population until 2030, then the absolute number of deaths in road accidents should decrease by 68% by 2024.[[114]](#footnote-114)

World experience shows that one country in world history has failed to reduce mortality from road traffic accidents (ROAD accidents) by 3.5 times in seven years, as required by the "Strategy for Safety of Road Traffic. The deadlines set in the May presidential decree until 2024 are too compressed in terms of international experience and the existing mortality rate, as noted. Anastasia Pyankova and Timur Fattakhov, Researchers at the HSE Institute of Demography, in their article "Mortality from Road Traffic Accidents in Russia: Approaches to Assessment, Trends and Prospects", published in the scientific journal Demographic Review.

According to Russian scientists, the main measures, the introduction of which will reduce injuries and mortality in road accidents:

• «lowering the non-punishable threshold;

• multiple increase in fines;

•introduction of penalty points system;

• amendments to the legislation providing for criminal responsibility for a significant excess of the speed».[[115]](#footnote-115)

Overall, the 2024 strategy is full of general definitions and lacks concrete goals and steps to achieve the reduction of mortality to the level of the European countries against which it has been compared. The document itself does not follow the Safe System Approach.

Reference should also be made to the WHO legal indices, which include eight vehicle standards, as well as laws related to drink-driving, speed, helmets, seat-belts and child seats. Seat-belts and helmet laws are in line with UN requirements and the Safe system approach, but other aspects are far from good international practice. Although the permitted blood alcohol level is lower than in Germany, and the fine is quite high (30,000 rub and deprivation of driving licence for up to 2 years), WHO finds laws on drink driving imperfect, as alcohol consumption is a major risk factor for road traffic crashes in Russia. Speed limits are just as inconsistent with the Safe System Approach as laws on child seats.

Despite the objective facts that reducing speeds and tightening traffic rules and fines is indeed a working strategy, ideas for changes in legislation even at municipal level can be rejected, as happened in the Moscow City Duma when Daria Besedina, Municipal Deputy, introduced a bill that implied changes in legislation necessary for safer roads. Her proposal was criticised, and the criticism was not constructive. However, a year later a report was commissioned by the Moscow government called 'Impact of Speed Management on Road Safety'. The report is a comprehensive comparison of speed limits and liability in different countries. According to the report, The Russian experience as a whole demonstrates similar traffic conditions to international traffic on regional roads and highways. However, with regard to the speed of traffic in settlements abroad, the practice of imposing a restriction of 50 km / h (and even 40 km / h) instead of 60 km / h is common. In some areas of the city, the maximum permitted speed is often reduced to 30 km / h. At the same time, the unpunished threshold of 20 km / h stands out noticeably against the background of international experience. According to international experience, such high-speed conditions carry the threat of high injuries, mortality and frequent accidents, which is reflected in the statistics of the traffic police. In addition, Russia has a milder system of penalties for speeding.

A table presenting information on speed limits and minimum fines in Russia compared to Germany, Sweden, and Great Britain is in Appendix 1. Practically speaking, a comparative legal analysis of foreign experience is crucial for the creation of international legal acts, as well as for legislative and law enforcement actions.

In Moscow, as well as throughout Russia, there is one of the highest speed limits with minimal fines and a high non-penalty threshold, which leads to a high mortality rate in road accidents. The minimum fine for speeding 20-40 km/h is 500 roubles, which can be reduced by 50% if paid within 20 days. For 40-60 km/h over the limit you have to pay 1000-1500 rubles (in case of repeated violation - 2000-2500 rubles). [[116]](#footnote-116) Recently, in many large cities, not only reduce the maximum permitted speed, but also slightly increase the non-penalty threshold, focusing on the error of technical means of measuring speed. However, it is necessary to refer to the successful experience of European countries.

«In connection with the need to make important management decisions in the field of improving road safety, the study of best foreign experience is of great importance, which is carried out mainly on the basis of comparative method and involves analysis not only of legal norms and institutions, but also the judicial and law enforcement practices of foreign countries.» [[117]](#footnote-117)

In practical terms, the comparative legal analysis of foreign experience plays an important role in legislative and law enforcement activities, in international practice in the preparation of international legal acts.

Y. Kalyuzhny also stressed the importance of using the successful experience of other states that have managed to radically reduce the death rate: "Orientation towards the ideal model of road safety together with implementation of integration framework of activities to ensure the considered safety will allow to take a new look at ensuring road safety and will act as an impulse to develop and implement innovations in the road and road sector, improve mechanisms of training of drivers of vehicles, disperse the traffic, etc." [[118]](#footnote-118). The researcher noticed that "Modern tendencies of integration and reception of international legal constructions in the Russian legislation allow to build state policy in the sphere of provision of road safety and national strategy taking into account effective mechanisms of reduction of accidents, fatalities and casualties"[[119]](#footnote-119) and that it is necessary "to form legal instruments of administrative responsibility of automobile road owners for low, and sometimes unacceptable quality of roads and road infrastructure elements".[[120]](#footnote-120)

the Russian government has set ambitious goals to improve road safety by 2024 and reduce road fatalities by half by 2030. However, there is concern that these goals may not be achieved due to the lack of a comprehensive safe system approach.

A safe system approach is a holistic approach to road safety that takes into account the interactions between road users, vehicles, and the road infrastructure. This approach focuses on reducing the likelihood of crashes and, when crashes do occur, reducing the severity of the injuries sustained. European countries such as Sweden, Germany, and the UK have successfully implemented this approach and have seen significant improvements in road safety. To implement a safe system approach in Russia, there needs to be significant changes in legislation and law enforcement. This may include stricter enforcement of traffic laws, increasing penalties for traffic violations, introduction of penalty system. The approach also requires collaboration between government agencies, road safety experts, and other stakeholders to develop a comprehensive plan. In summary, the safe system approach is an effective tool to improve road safety, and Russia could benefit from implementing it. However, this will require significant changes in legislation and law enforcement.

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According to S.Gordeeva, Major of Police and PhD in Law, for the achievement of the Sustainable Development Goal 3, foreign legislation deserves special attention: «In connection with the need to make important management decisions in the field of improving road safety, the study of best foreign experience, which is carried out mainly on the basis of comparative method and involves analysis not only of legal norms and institutions, but also judicial and law enforcement practices of foreign countries, acquires great importance. In practical terms, the comparative-legal analysis of foreign experience plays an important role in legislative and law enforcement activities, in international practice in the preparation of international legal acts» [[121]](#footnote-121).

In summary, the safe system approach is an effective tool to improve road safety, and Russia could benefit from implementing it. However, this will require significant changes in legislation and law enforcement and a coordinated effort from all stakeholders involved in road safety.

# Conclusion

Firstly, the global road safety agenda emphasizes the significance of global coordination and cooperation in addressing the problem of traffic accidents and fatalities. Road fatalities can indeed be described as an epidemic due to their significant impact on public health and safety. Similar to how an epidemic spreads and affects a large number of people, road fatalities cause widespread harm and loss of life. They represent a persistent and urgent public health issue that requires attention and action from governments, organizations, and individuals. Just like combating an epidemic, addressing road fatalities requires comprehensive measures, including improved infrastructure, stricter regulations, enhanced enforcement, public awareness campaigns, and advancements in vehicle safety technology. By recognizing road fatalities as an epidemic, societies can prioritize and mobilize resources to prevent and reduce the tragic loss of life on our roads.

Secondly, The Safe System approach, which serves as the foundation for all successful international strategies, is one way to achieve this goal by implementing a comprehensive and integrated approach to road safety management that takes into account the human and social factors that contribute to road crashes. Legislation and law enforcement play a crucial role in the implementation of the Safe System approach to road safety. They encompass various measures and actions to create a legal framework that promotes safe behavior and holds individuals accountable for their actions on the road.

Analysis has shown that Sweden, Germany, and the United Kingdom have successfully reduced road fatality rates to a significant extent, making them countries with the lowest social risk of losing lives in road traffic crashes. However, Sweden stands out among the rest, as the country has demonstrated a readiness for radical changes not only in technical aspects but also in its approach to reducing road fatalities. Sweden has introduced Vision Zero, a concept based on the Safe System Approach, which advocates for a zero-tolerance approach to road traffic deaths.

The analysis revealed that achieving the road traffic mortality reduction target of 50% in Russia requires the government's readiness for decisive actions and implementation of the Safe System Approach, similar to other countries. According to Russian scientists, Russia faces an extremely ambitious task. The analysis revealed that achieving Sustainable Development Goal 3 (reducing road traffic fatalities by 50%) in Russia requires the government's readiness for decisive actions and the implementation of the Safe System Approach, similar to other countries. According to Russian scientists, Russia faces an extremely ambitious task. Comparative analysis has shown that Russia stands out with an extremely high level of social risk, high speed limits, relatively low penalties and lack of systematic approach.

Considering the results of the complex analysis, to significantly reduce the level of traffic injuries and fatalities as a part of achieving the Sustainable Goal 3, Russia must take radical, swift and decisive steps, involving both the legislative branch and the executive branch. This requires:

• lowering the non-punishable threshold;

• multiple increase in fines;

•introduction of penalty points system;

• amendments to the legislation providing for criminal responsibility for a significant excess of the speed.

Road fatalities can indeed be described as an epidemic due to their significant impact on public health and safety. Similar to how an epidemic spreads and affects a large number of people, road fatalities cause widespread harm and loss of life. They represent a persistent and urgent public health issue that requires attention and action from governments, organizations, and individuals. Just like combating an epidemic, addressing road fatalities requires comprehensive measures, including improved infrastructure, stricter regulations, enhanced enforcement, public awareness campaigns, and advancements in vehicle safety technology. By recognizing road fatalities as an epidemic, societies can prioritize and mobilize resources to prevent and reduce the tragic loss of life on our roads.

The task of society and governments is to reduce the risks and probability of accidents, especially fatal ones, and to make tolerance of traffic accidents an unacceptable response.

It’s obvious, that Russia faces a significant challenge in reducing the level of road fatalities and improving road safety. Immediate action is crucial to address this issue effectively. The government, along with relevant authorities and stakeholders, must prioritize road safety as a national concern and implement comprehensive strategies to combat this problem.

International exchange of experience in road safety fosters collaboration and cooperation between countries. It allows Russia to establish international relations and partnerships with other nations that share similar goals and challenges in road safety. Through participation in international conferences, workshops, and initiatives, Russia can learn from the experiences of other countries, share its own expertise, and contribute to global efforts to reduce road traffic fatalities. These international collaborations enable the exchange of knowledge, best practices, and innovative solutions, which can be applied to enhance road safety measures in Russia. By actively engaging in international relations, Russia demonstrates its commitment to improving road safety and working towards a common goal of creating safer and more sustainable road environments worldwide.

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# Appendix 1.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Social Risk, Speeding and Fines by Country | | | | |
|  | Russia | UK | Germany | Sweden |
| Social Risk in 2017. (International Transport Forum) | 13.21 | 2,81 | 3.85 | 2.51 |
| Social Risk in 2021 | 9.7 | 2.39 | 3.08 | 2.02 |
| Speed limit in town (2021) | 60 km/h + 20 km/h (non-punishable threshold) | 48 km/h | 50 km/h | 50 km/h |
| Min. fine- (2021) | 500 rub (7 euro) (+50% discount when paid within 20 days) | 100 pounds | 20 euro (out of town) | 1500 kr (out of town) (145 euro) |

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