**GLOBAL PLAN of ACTION for the 2021 – 2030 DECADE of ACTION for ROAD SAFETY**

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Table of Contents

[Part I: INTRODUCTION 1](#_Toc70929371)

[**Purpose of the Plan** 1](#_Toc70929372)

[**Achieving at least a 50% reduction in road deaths and injuries by 2030** 1](#_Toc70929373)

[**Learnings from the 2011-2020 Decade of Action** 2](#_Toc70929374)

[**Political will at the highest level is paramount** 2](#_Toc70929375)

[**Good governance is central to safe system implementation** 3](#_Toc70929376)

[**Road safety management as an integrated function within the safe system** 3](#_Toc70929377)

[**Opportunities to leverage inter-dependencies and co-benefits of road safety** 3](#_Toc70929378)

[**Accession and effective implementation of UN road safety conventions** 3](#_Toc70929379)

[**The importance of enhanced support to LMICs** 4](#_Toc70929380)

[**Decentralized decision-making** 4](#_Toc70929381)

[**Managing the evolving nature of transport and mobility** 4](#_Toc70929382)

[PART II: A FRAMEWORK for ROAD SAFETY GOVERNANCE 5](#_Toc70929383)

[PART III: IMPLEMENTATION of the SAFE SYSTEM 8](#_Toc70929384)

[**Stage 1. Assessment of the road safety context** 8](#_Toc70929385)

[**Stage 2. Development of a plan** 9](#_Toc70929386)

[**Stage 3. Implementation of the plan and monitoring of progress** 9](#_Toc70929387)

[PART IV: SAFE SYSTEM INTERVENTIONS 11](#_Toc70929388)

[**Road infrastructure** 11](#_Toc70929389)

[**Areas of action** 12](#_Toc70929390)

[**Considerations for implementation** 14](#_Toc70929391)

[**Vehicle safety** 14](#_Toc70929392)

[**Areas of action** 15](#_Toc70929393)

[**Considerations for implementation** 17](#_Toc70929394)

[**Road user behaviour** 17](#_Toc70929395)

[**Areas of actions** 18](#_Toc70929396)

[**Considerations for Implementation** 20](#_Toc70929397)

[**Post-crash response** 21](#_Toc70929398)

[**Areas of actions** 21](#_Toc70929399)

[**Considerations for Implementation** 22](#_Toc70929400)

[PART V: MONITORING and EVALUATION 24](#_Toc70929401)

[PART VI: WAY FORWARD 26](#_Toc70929402)

# Part I: INTRODUCTION

Mobility is integral to nearly every aspect of our daily lives. We step from our homes into a road system that leads us to work and school, to get our food, and to many of our daily family and social needs. The influence of the road transport system is so pervasive that its safety – or lack thereof – affects a wide range of basic human needs. As such, ensuring the safety of roads and enabling sustainable mobility plays an important role in reducing poverty and inequities, increasing access to employment and education as well as mitigating the impact of climate change. In fact, the efficiency, accessibility and safety of transport systems directly or indirectly contributes to the realization of many of the United Nations Sustainable Development Goals.

Unlike other modes of transport such as aviation, railway or maritime transport, road transport has lacked an integrated approach towards safety. Road traffic deaths and injuries are still tolerated in many countries as an unavoidable cost for mobility even though they are currently the leading cause of death for young people 5-29 years of age. Globally, the number of road traffic deaths and serious injuries has not decreased during the last decade and in the absence of strong and effective action to reduce this burden, current global trends in road deaths indicate that, the coming decade will produce over 17 million deaths and may also bring some 500 million more injured. In addition to human suffering and grief, road deaths and injuries generate high economic costs through lost income, medical and rehabilitation costs, as well as judicial and custodial costs.

## **Purpose of the Plan**

UN General Assembly resolution [74/299](https://undocs.org/en/A/RES/74/299) (2020) proclaimed the period 2021 - 2030 as the Second Decade of Action (DoA) for Road Safety. This Global Plan of Action serves as a guiding document to support Member States in achieving this goal and follows developments from the 2011 – 2020 Decade of Action for Road Safety, including four resolutions on improving global road safety adopted by the UN General Assembly and outcome documents of the three global ministerial conferences respectively held in the Russian Federation (Moscow, 2009), Brazil (Brasilia, 2015) and Sweden (Stockholm, 2020). It builds upon the foundation of the pillars of road safety presented in the global plan of the last decade of action and draws further attention to effective governance as a central aspect of implementation of the safe system.

This plan should not be interpreted as prescriptive. It is intended to serve as a guide for countries and other actors to develop, implement and evaluate iteratively, actions that are adapted and tailored to their specific contexts, to systematically and methodically improve the safety of road transport systems over the next decade.

**Box 1: Road safety and sustainable development**

## **Achieving at least a 50% reduction in road deaths and injuries by 2030**

The goal of the Decade 2021-2030 is to achieve at least a 50% reduction in road traffic deaths and injuries by 2030. With latest estimates showing approximately 1.3 million road traffic deaths annually, this means that the targeted reduction will be in the order of 650,000 deaths. Achieving a reduction of this scale requires action by all countries, irrespective of income or development level. This target is achievable—in all settings, if the existing solutions are implemented using a safe system approach by all countries over the coming 10 years. In some countries the target will be realized through waves of substantial changes whereas in others, it will imply modest annual achievements that are sustained over time. For example, a gradual decline in global road traffic deaths and injuries of approximately 7% per year would lead to the achievement of 50% target in the number of deaths in 10 years.

It is most likely that in many countries, the observable changes in deaths and injuries will be uneven throughout the decade with a sporadic mix of substantial and smaller gains (or even setbacks) at different points in the decade. Irrespective of the path that will be taken, achieving this target will require a sustained effort over the entire duration of the decade. For this reason, this plan recommends an iterative approach to the development and implementation of national action plans for road safety.

## **Learnings from the 2011-2020 Decade of Action**

The DoA 2011-2020 provided a foundation for the current global plan. It attracted new funding, saw the emergence of new partnerships, and brought road safety closer to the global policy arena of development issues. The inclusion of road safety among the Sustainable Development Goals (SDGs) in targets 3.6 and 11.2 along with the establishment of a United Nations Secretary-General’s Special Envoy for Road Safety by the United Nations Secretary General signifies the importance of road safety among global needs and provides a focal point for promoting road safety activities among government and non-government organizations worldwide.

Despite these achievements, at the end of the Decade of Action for Road Safety 2011-2020, we find ourselves with little progress overall in reducing the number of road traffic deaths. However, the Decade of 2011-2020 has provided a wealth of evidence on what works and what does not. As such, this plan of action has been informed by critical insights collected from a range of national and global stakeholders as well as from the progress reported in the series of Global Status Reports. It was also inspired by the findings of an Academic Expert Group (AEG) convened to document key learnings from the previous decade as part of the preparations for the 3rd Ministerial Conference on Road Safety (Sweden, February 2020). The main insights from these sources are highlighted below.

### **Political will at the highest level is paramount**

Road safety is a result of deliberate efforts on the part of the government and other sectors of society. Given the significant negative impact of road crashes and large positive payoffs of greater safety, road safety must be treated as a political priority at the highest level of government. The government needs to acknowledge road safety as an important and valuable public good. In the absence of strong political will, road safety will not become a reality. Like other priorities of government, road safety is a political choice. A government has to develop and implement policies and programmes to improve road safety. If political will is focused on ending needless road deaths and if short- and long-term investments are made at national and sub-national levels, significant progress will be made towards achieving the 50% reduction in rod traffic deaths and injuries expected of the Decade of Action. A very important indication of the political will is the level of financing, across sectors, allocated to road safety related objectives at the national level, including domestic resource mobilization that leverages innovative financing tools.

### **Good governance is central to safe system implementation**

Good governance is central to the ‘nuts and bolts’ of road safety. Shared responsibility is the essence of the safe system approach and sharing responsibilities requires adherence to principles of good governance such as transparency and accountability. The implementation challenges identified from collective reflective insights and some research were lack of local buy-in, insufficient guidance on implementation, lack of robust monitoring and evaluation strategies, misalignment of work and plans, lack of coordination across various levels of the system, the fragmentation of the current system and structural barriers to multi-sectoral efforts. These challenges reveal lack of ownership and accountability to be a major implementation challenge of road safety policy. Good governance, including respect for the rule of law is, therefore, essential to ensuring road safety.

### **Road safety management as an integrated function within the safe system**

While road safety management was considered as a separate pillar during the DoA of 2011-2020, it is addressed as a cross-cutting theme and as a part of safe systems governance in this plan. Management should not be pursued as a stand-alone goal but as a means to govern—through coordination, legislation, funding and resource allocation, promotion, monitoring and evaluation, research and development and knowledge transfer. Whether these functions are to be handled by a formal stand-alone governmental lead agency or by de facto lead agency is to be left to the situation of each country. It is necessary however, to ensure a shared multi-sectoral responsibility for results through an integrated approach to road safety.

### **Opportunities to leverage inter-dependencies and co-benefits of road safety**

The inclusion of specific road safety targets in Agenda 2030 reflects universal recognition that death and injury from road crashes are now among the most serious threats for the sustainable development of countries. Article 55 of the Resolution A/RES/70/1 states that the 17 Goals are “integrated and indivisible, global in nature and universally applicable.” This means that road safety cannot be compromised or traded-off in order to achieve other social needs. On the contrary, improving road safety contributes to the realization of other needs such as access to e.g. healthcare, employment or education. In this context, a lesson learned from the past decade is that road safety should not be approached as a stand-alone issue but as an integrated component of many different policy agendas.

### **Accession and effective implementation of UN road safety conventions**

The Global plan for the 2011-2020 DoA called upon countries to adhere to and fully implement the major United Nations road safety legal instruments. These instruments provide a strong foundation for countries to build domestic legal frameworks contributing to road safety and facilitating international road traffic. Target 2 of 12 global voluntary performance targets adopted in 2017 by Member States reiterated the call for all countries to accede to one or more of the core road safety related UN legal instruments by 2030. Yet, progress made over the last decade on both accession and implementation of these conventions has been limited. In fact, only 40 countries have acceded to all of the key road safety international legal instruments and their implementation remains a challenge in many countries. Notably, experience reveals that even where accession takes place, many countries fail to take the necessary steps to transpose the provisions of the UN conventions into their national laws and to enforce them which is a key step in ensuring their benefits.

### **The importance of enhanced support to LMICs**

More than 90% of road traffic deaths occur in low-income and middle-income countries, which have less than 60% of the world’s registered vehicles. While the total number of deaths is clearly related to both the population and motorization levels within a country and does not give an assessment of risk, it nonetheless gives an indication of where intervention could help significantly to reduce the total number of road traffic deaths at a global level. On top of the enormous human suffering caused, the economic costs of poor road safety keep hundreds of millions in poverty, with the drain in their productive human resources, and the economic losses estimated at two to five percent of GDP in these countries. Accordingly, pursuant to the UN General Assembly resolutions 70/260 and 74/299, it will be key to scale up funding for road safety action in LMICs, including via a blended finance models targeting traditional donors, private sector, and innovative financing (inter alia via the UN Road Safety Fund).

### **Decentralized decision-making**

Improving road safety through a safe system approach implies actions and changes at many levels. At the global level, international regulations and standards are critical for increasing road safety through the adoption of uniform traffic rules and also for motivating national-level changes. Within a country, whereas the responsibility of setting priorities, developing strategies, enacting legislation, as well as allocating resources typically rests with national governments, implementation often occurs at the different orders of government. National policies however, cannot always anticipate the diversity of community needs, preferences and practices, and for this reason, many decisions and policies related to transport planning – including urban design and land use, are taken by local authorities. Allocating appropriate responsibilities and resources to decision-makers and actors at national and local governments, as well as international bodies, is a key element of ensuring effective implementation.

### **Managing the evolving nature of transport and mobility**

A key lesson learned during the last decade is that road safety solutions cannot be designed and implemented in a static manner but should be adjusted as change happens. Over the last decade, countries have been marked by many changes created by technological innovations (e.g., micro mobility development), as well as challenges such as the impact of transport on climate change or space constraints associated with growing urbanization. More recently the Covid 19 pandemic provided another example of unexpected challenges faced by countries and impacting their transport solutions. These changes – with both the opportunities and the threats presented – should be integrated by countries as they evaluate and redesign their road safety strategies. As transport evolves, so too must the solutions that are put in place to ensure safety.

**Box 2: The impact of road safety on children**

# PART II: A FRAMEWORK for ROAD SAFETY GOVERNANCE

The aim of the safe system approach is to enable mobility without deaths and serious injuries. Even in the event of crashes, the various elements of system designed using this approach act to mitigate the severity of the crash and reduce the likelihood of death and injury. Effective implementation of the safe system approach requires managing complex and dynamic interactions among vehicles, road infrastructure, road user behaviour. These interactions need to be understood, governed and managed in a holistic and integrated manner.

A safe system approach recognizes that:

* the safety and preservation of human life as the highest value of consideration and that deaths and injuries are not an inevitable outcome of road transport;
* humans are fallible and capable of making errors that are not mitigated by education, training or enforcement;
* humans are fragile and have limits to the crash forces they can sustain, before serious or fatal injuries are inevitable; and
* those who design and maintain the roads, manufacture vehicles, and administer safety programmes share responsibility for safety with road users so that when a death or an injury occurs, remedies are sought throughout the system.

This approach requires a commitment to proactive and simultaneous improvement to roads, vehicles, speed-management, road user behaviour and post-crash response so that the entire system is made safe rather than just locations or situations where crashes occurred. In this way, the individual parts of the system combine for a more effective/beneficial overall effect and, if one part fails, the other parts will still minimize harm.

This approach results in:

* A road transport system that anticipates and accommodates human errors. Crashes will always occur, but consequent death or serious injuries are prevented; and in case of crashes
* road infrastructure and vehicle design that limit (including absorbing or redirecting) crash forces to levels that are within human tolerance.

As shown in figure 1, the principle of shared responsibility is central to the effectiveness of the safe system and yet one of the most challenging to apply and manage as it requires good governance. Historically, responsibility for road safety has been placed on road users, which led to blaming the victims of systems that were often inadequately designed. Though governmental agencies have the primary responsibility to design a safe road transport system and implement a road safety action plan, the role and influence of other actors are increasingly recognized as an important part of the safe system. The private sector and non-governmental organizations can also contribute in various ways. For example, by requesting safety standards in aspects such as procurement of road transport services, the operations of public transit and commercial vehicles. The way that private companies manage their supply chain, including safety protocols for issues such as limits for driving times, medical qualifications for professional drivers and the assumption of legal accountability for actions by its sub-contractors, can have a great impact on road safety. Thus, system designers consist of all actors, who, in their individual or professional capacity, influence the design and function of the road system.

Figure 1: Safe Systems Governance (to be re-drawn by designer)



Recognizing explicitly the role of all actors as system designers and their responsibility in respecting the rule of law allows for greater transparency and accountability. Nevertheless, the central role of the government in initiating and coordinating road safety needs to be sustained even in sharing responsibility with other actors. Public reporting by all actors is critical to ensuring transparency and accountability. State actors have an obligation to make public policies and performance indicators including the number of road traffic deaths, injuries and other relevant data. Similarly, non-state actors may wish to demonstrate their commitment to the principles of the safe system through ensuring accountability and transparency in their road safety programmes.

Ensuring that all actors are accountable and responsible for programmes assigned to them is key in implementing a safe system approach. Guaranteeing commitment and holding different actors accountable for their responsibilities remain a challenging issue though key to implementation of a safe system approach. The following governance mechanisms, achieved through efficient management, can be used:

* provide a legal mandate or basis for the work of different agencies;
* supervise and monitor road safety programmes by each agency and overall coordinating body where one exists;
* encourage compliance to standards such as procurement practices by transport providers and users.

There is no single pathway for governing the establishment and implementation of a safe system; moving to a safe system is a learning-by-doing process best described as a journey that presents opportunities, hazards and challenges along the way. Countries can — and should, pursue different paths in how they apply this approach to their existing systems. The application of the principles of the safe system is feasible in all settings, including low- and middle-income countries. By shaping these principles to the cultural, temporal and local context through effective governance, countries can strengthen and improve the safety of indigenous transport systems that are responsive to the needs and preferences of the populations they serve.

**Box 3: ITC Recommendation for Enhancing National Road Safety Systems**

**Box 4: Speed management within the safe system**

**Box 5:** **Procurement Practices & Road Safety**

# PART III: IMPLEMENTATION of the SAFE SYSTEM

Ensuring effective implementation of the safe system is essential to the attainment of the global goal to halve road traffic deaths by 2030. Declarations, resolutions and accession to conventions alone will not yield improvements unless they are translated into concrete actions in countries. Improving the road safety situation in a country requires a continued and sustained cycle of planning, executing and evaluating programmes. As shown in figure 3 below, implementing a continuous cycle of road safety improvement should begin with an assessment of the existing road safety system, followed by the development, execution and evaluation of national and local plans of action by different actors within the system. This points to the importance of sharing of responsibility by different government agencies and involving—through consultative processes- other stakeholders, including the public, the private sector and civil society, in improving road safety in a country.

Figure 2. Continuous cycle of implementation (to be re-drawn by designer)



## **Stage 1. Assessment of the road safety context**

An assessment of the existing road safety situation reveals how the existing system is performing and what opportunities and resources are available. Countries typically are at different stages of road safety policy development and implementation. Some have low road traffic death rates, and some have high rates. Some have effective and efficient organizational frameworks while others have inadequate frameworks. Therefore, each country needs to assess its situation to determine key problem areas, strengths and weaknesses of existing systems, and priority interventions. Capturing existing assets and strengths in the current system is crucial to ensure that all avenues for actions and resources are fully optimized and that solutions are context-based and not simply “imported” from different settings.

The scope of situational assessment will vary and for this reason, a situational assessment determines:

* the structure, trend and pattern of road traffic deaths and injuries: number of people killed and injured by sex, age and administrative units;
* the risk factors contributing to the problem of road traffic deaths and injuries in a country;
* the effectiveness of current measures and programmes, including legislative and policy frameworks, activities of different agencies and availability of road traffic deaths and injury data;
* the efficiency of the organizations responsible for road safety policy, including coordination, available financial and human resources, availability and use of up-to-date road safety knowledge and stakeholder engagement;
* existing challenges and opportunities such as links to SDG agenda for road safety improvements; and
* what can realistically be achieved with existing capability.

## **Stage 2. Development of a plan**

The plan should be based on the insights generated from the situational assessment and inputs from all government agencies and other stakeholders. The plan should specify problems to be addressed, a vision to be pursued, a target to be achieved and objectives to be attained. It should identify short, medium and long-term priorities for action, recognizing that not everything can be done at once. The plan should be realistic, and its contents should recognize the cultural norms, standards, and social preferences of the society.

The role of different government agencies at national and local levels needs to be specified as to which agencies will be responsible for which priorities. Resources required, and how those resources will be generated or from which sources they will be allocated, should be indicated in the plan. A mechanism for monitoring and evaluating the plan with performance indicators, sources of data, methods for collecting and analyzing data and ways of disseminating and utilizing results of evaluation needs to be included in the plan. A timeline showing when different activities will be executed should also be present.

## **Stage 3. Implementation of the plan and monitoring of progress**

The preparation of a quality road safety plan is important, but it will not deliver the expected results if it is not implemented. Financial and human resources need to be allocated continuously as the priority technical interventions are executed. Countries need to effectively utilize existing financial resources specifically allocated to road safety programmes. In addition to funding and allocating resources, the overall coordinating entity needs to ensure agencies at national and local levels that are responsible for implementing different components of the plan are carrying out their work. Regular review or reporting on implementation progress by different agencies is critical in tracking the process of executing the plan.

Ensuring communication and sharing of information by different agencies through established mechanisms help in building synergies and in early identification of gaps. It is not always possible, for example, to anticipate the amount of effort required or barriers to changing policies. Responding to these challenges requires effective monitoring and coordination to make course adjustments, including re-allocating or re-distributing human and financial resources.

The collection of quality data is a key prerequisite in implementation and should be planned and executed well. The creation of trauma registries, harmonization of definitions, and establishment of linkages facilitate the gathering of data where resources are limited as well as ensuring the validity of the data collected. Knowledge management should be embedded within routine practices such as infrastructure inspections and audits, periodic technical vehicle inspections, and routine management reviews to optimize the opportunities for learning. These existing processes generate valuable data and insights that can inform critical decisions about implementation. The data, knowledge and insights generated from monitoring and evaluation of the implementation of action plans should feed into the situational assessment for the next cycle of implementation. The assessment should draw upon not only the results of the monitoring and evaluation, but also incorporate current research as well as innovations—technological and scientific, that could influence the priorities for the next cycle.

**Box 6:** **Gender Perspectives in Safe Systems Implementation**

**Box 7: Safe Systems Implementation in Resource Limited Settings**

**Box 8: Modal shift**

# PART IV: SAFE SYSTEM INTERVENTIONS

This part presents key areas for action to contribute to a safe system. These key areas are road infrastructure, vehicle safety, road user behaviour, and post-crash-response. The recommended actions for these key areas are based the principles of the safe system as well as core UN legal instruments pertaining to road safety including the following:

* 1968 Convention on Road Traffic, and its predecessor the 1949 Convention on Road Traffic, which facilitate international road traffic and increases road safety through the adoption of uniform road traffic rules;
* 1968 Convention on Road Signs and Signals which establishes a set of commonly agreed road signs and signals;
* 1958 Agreement concerning the Adoption of Harmonized Technical United Nations Regulations for Wheeled Vehicles, Equipment and Parts which can be Fitted and/or be Used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the Basis of these United Nations Regulations, which provides the legal framework for adopting uniform United Nations Regulations for all types of wheeled vehicles manufactured, specifically related to safety and environmental aspects;
* 1997 Agreement concerning the Adoption of Uniform Conditions for Periodical Technical Inspections of Wheeled Vehicles and the Reciprocal Recognition of Such Inspections which provide the legal framework for the inspection of wheeled vehicles and for the mutual recognition of inspection certificates for cross-border use of road vehicles;
* 1998 Agreement concerning the Establishing of Global Technical Regulations for Wheeled Vehicles, Equipment and Parts which can be fitted and / or be used on Wheeled Vehicles, which serves as the framework for developing global technical regulations for vehicles on safety and environmental performance;
* the 1957 Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) which defines the dangerous goods that may be transported internationally and transport conditions, and sets requirements for operations, driver training and vehicle construction; and
* 1970 European Agreement concerning the Work of Crews of Vehicles engaged in International Road Transport (AETR)which addresses professional driver fatigue.

These recommended actions also draw from interventions and best practices that have proven effectiveness in preventing road traffic fatalities and injuries. Additional technical guidance on these areas of work is available through the WHO *Save LIVES Technical Package*. The relevant global voluntary performance targets for road safety for each area of action, agreed upon by Member States in 2017, are highlighted under each area of action. A number of these targets address cross cutting outcomes—such as speeding, that are influenced by actions in road infrastructure, vehicle safety, as well as road user behaviour. Thus, while actions have been grouped according to the primary outcome that they directly influence, emphasis is put on synergies between action areas within the safe system.

## **Road infrastructure**

Road infrastructure has direct and indirect effects on the risk for crash, injury and death. The design, construction and maintenance of roads and their environments directly contribute to the risk of death and injuries as well as influence how road users perceive risk and behave on the road. As a key element of the safe system, road infrastructure must be designed to enable equitable access and accommodate the mobility needs of all road users including pedestrians, cyclists, riders of powered two- and three wheelers, users of public transport, as well as drivers of motorized vehicles. High quality technical standards for design and construction are key components in ensuring safe road infrastructure that is both intuitive to use (to minimize the occurrence of human error) and forgiving (to compensate for human error). Such design and technical standards should be applied in the construction of new roads as well as the maintenance and eventual upgrading of existing roads.

Of the 12 global road safety performance targets, two relate directly to road infrastructure:

* Build all new roads according to high quality technical and safety standards taking into account the needs and uses of different road users including pedestrians, cyclists, and those using motorized transport (target 3); and
* Maintain and upgrade existing roads to ensure that at least 75% of0 travel occurs on existing roads that meet high quality technical and safety standards for all road users (target 4).

Other target(s) to which safe road infrastructure can contribute:

* Reduce by half the proportion of vehicles travelling over the posted speed limit and achieve a reduction in speed related injuries and fatalities (target 6).

### **Areas of action**

To improve the safety of road infrastructure, there are three action areas that governments should consider.

The first action is to ensure, through legislation, that the road network is classified according to the primary functions of each road. Many roads have different functions and are used by different types of road users and vehicles with large differences in speed potential, mass of vehicles and degree of protection. Classifying roads functionally in the form of a road hierarchy is important for providing safer routes and functional specific safer designs. Such a classification takes account of land use, location of crash sites, traffic flows and speed management. For example, expressways and highways are planned and built mainly for the through traffic or rapid motorized mobility of people and goods, whereas local roads are developed predominantly for providing local accessibility. Each functional road class needs to include appropriate safety features. Functional classification of roads is often missing in existing road networks. Classifying roads according to primary functions should be a key consideration in transport and land use planning. The design and use of the broader landscape for commercial, industrial, recreational, conservation and agricultural or a mix of purposes should also pay attention to safe road and transport use.

The second action area consists of specifying safety features or designs for different types of roads. Legislation should be used to require that safety designs and measures are indicated for specific zones such as schools, hospitals, at-gradelevel crossings and work zones. Speed limits, traffic calming measures and crossings need to be specified for these zones. In addition, safety designs and features need to be specified for the entire network. Depending on the function of the road, the following are appropriate safety features to be required by law: bicycle lanes, segregated non-motorized transport lanes, motorized two-wheeler lanes, exclusive bus and other high-occupancy vehicle lanes, heavy vehicles lanes, vehicle-free zones, sidewalks, pedestrian crossings and roundabouts. There are international, national and local standards to be utilized when specifying these safety features or designs for the road network or specific zones. Safety standards for road infrastructure of international interest have been developed at regional level by the UNECE (1975 European Agreement on Main International Traffic Arteries) and UNESCAP (Intergovernmental Agreement on the Asian Highway Network). These standards can be utilized by countries when preparing national road infrastructure safety standards. It is important that road safety features are included not just during design of roads but also adhered to during construction and maintenance. Depending on countries, legislation on safety standards for road infrastructure will be enacted at national, subnational or regional level.

The third area of action is for governments to ensure that all actors adhere to the specified safety features for different roads across the spectrum of road infrastructure planning, development and maintenance. Both existing and new roads need to have appropriate safety features included. These features are missing on some roads though they are specified in national guidelines. Thus, proactively including and installing road infrastructure safety facilities (e.g., signs and signals, median dividers, side barriers, speed control measures) and additional road safety infrastructure facilities (e.g., crash-cushions, coloured pavements, road lighting) at high-risk locations depending on the local conditions is necessary and a vital aspect of safety-responsive road infrastructure planning and development. On the topic of road signs and signals, the 1968 Convention on Road Signs and Signals is instructive. In addition, ensure safety features in pavement management is also important. Pavement conditions contribute to road traffic injury risk, for example, potholes and pavement to shoulder drop-offs. Unsafe pavement defects need to be repaired without delay by relevant road authorities. In this regard, a central role of governments is to set and enforce the safety standards for road infrastructure through legislation.

Road safety audit and inspection of existing and new roads are an important means to ensure compliance with safety features and standards for road infrastructure. Road safety audit is to be conducted by independent and qualified auditors during all stages of a new road (pre-feasibility/ planning onwards) and mandatory proactive audit/ inspection of existing roads and improvement measures are to be undertaken. Road safety audits/inspections are practiced in many countries following the guidelines of their own which were prepared considering the local conditions and requirements. However, harmonization of the audit/ inspection procedure among agencies and countries would be beneficial. The qualifications of auditors/ inspectors need to be insured.

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| BOX 9: Recommended actions to improve the safety of road infrastructure* Classify roads according to primary functions:
* Establish legislation for classifying the road network according to primary functions;
* Classify the road network considering land-use, location of crash sites, traffic flows and speed management.
* Specify safety features and standards for different types of roads:
	+ Establish legislation requiring safety features and standards for different types of roads;
	+ Specify safety standards considering roads’ functions and needs of all road users. This includes specification of safety standards for bicycle lanes, segregated non-motorized transport lanes, motorized two-wheeler lanes, exclusive bus/ high occupancy vehicle lanes, heavy vehicle lanes, vehicle-free zones, sidewalks, pedestrian crossings and roundabouts;
	+ Specify safety features for specific zones: schools, hospitals, work zones including posting of speed signs providing for lower speed limits, traffic calming measures and safe crossings;
	+ Specify safety features for pavement (road surface).
* Ensure safety features and standards for all roads are applied for both new roads and existing roads:
	+ Establish legislation requiring adherence to safety standards at all stages of development by all those involved, including financial institutions that fund infrastructure development projects;
	+ Take proactive action to ensure safety of road infrastructure including through posting of signs and signals, median dividers, side barriers, speed control measures;
	+ Reinforce road infrastructure safety measures at high-risk locations including through crash-cushions, coloured pavements, road lighting;
	+ Conduct independent road safety audit/ inspection on existing and new roads
	+ Assess high-risk roads and rectify blackspots and pavement defects on existing roads.
 |

### **Considerations for implementation**

Ensuring that agencies responsible for road infrastructure planning and development at national and subnational level carry out their work in a transparent and accountable manner is a key consideration in the development and maintenance of road infrastructure. Coordination and assignment of responsibility for road infrastructure planning and development are important. In some settings, this work involves international collaboration between national actors and bi-lateral as well as multi-lateral development agencies. Alignment of priorities, standards, and accountability by all actors is necessary to ensure that safety is considered at all stages of development: planning, financing, construction and post-construction audits. Different agencies are responsible for different types and parts of the road infrastructure. Leadership and effective management of these activities—including the development of technical skills and competencies to carry out this work, should be a key priority for ensuring safe road infrastructure.

## **Vehicle safety**

The safety design, construction and maintenance of motor vehicles, including powered two- and three-wheelers, plays an important role in the safe system. Historically many of these safety features were designed to mitigate the impact of a crash, thereby reducing the severity of injuries and preventing death. Increasingly however, safety features such as intelligent speed control and technologies to disable text messaging while driving, are being used to prevent crashes and reduce the impact of human error. As such, motor vehicles need to be designed, produced and periodically inspected to ensure a high quality of safety for drivers and their passengers, and road users outside of the vehicle.

Inadequate in-vehicle protection, inadequate vehicle design for protection of vulnerable road users, and vehicle defects all contribute to injury severity in case of a road traffic crash. To improve vehicle safety, performance-based safety requirements must be met by the vehicle’s design and production to avoid crashes (active safety) and to reduce the injury risk when a crash occurs (passive safety). Further, it is important that road user protective equipment such as safety belts, child restraint systems (including anchoring mechanisms) and motorcycle helmets are produced according to international harmonized safety regulations and standards.

Ensuring an appropriate level of safety for vehicles and equipment including safety belts, child restraint systems and motorcycle helmets is therefore a key aspect of a safe system, which complements other aspects like road infrastructure and road user behavior.

Of the 12 global road safety performance targets, one relates directly to vehicle safety:

* 100% of new (defined as produced, sold or imported) and used vehicles meet high quality safety standards, such as the recommended priority UN Regulations, UN Global Technical Regulations, or equivalent recognized national performance requirements (target 5).

Other targets to which vehicle safety contributes include:

* reduce by half the proportion of vehicles travelling over the posted speed limit and achieve a reduction in speed related injuries and fatalities (target 6);
* Increase the proportion of motorcycle riders correctly using harmonized high standard certified helmets close to 100 per cent (target 7);
* increase the proportion of motor vehicle occupants using safety belts or harmonized high standard certified child restraint systems to close to 100 per cent (target 8).

### **Areas of action**

To improve the safety of vehicles, there are two action areas that governments should consider.

The first action area consists of requiring, through legislation (including regulations, policies and protocols), for manufacturers to meet high-quality harmonized safety standards for all motor vehicle types, safety belts, child restraints and motorcycle helmets. Although effective technological solutions exist, the extent to which they are integrated into vehicles and the above road user protective equipment depends on the regulatory requirements in place in the destination market, which vary between countries, resulting in vehicles or protective equipment being produced/put on the market with different safety levels.

A key role of government is therefore to ensure that appropriate international harmonized safety standards for motor vehicles, safety belts, child restraint systems and motorcycle helmets be required through legislation. The use of safety belts, child restraint systems and motorcycle helmets must also be enforced through legislation.

As vehicles cross borders and may be exported during the vehicle’s life cycle from a developed to a developing country, international vehicle safety regulations such as UN legal instruments on vehicles are helpful in assisting countries in establishing rules to provide and implement harmonized safety standards in the certification of vehicles and their parts, even if countries do not have vehicle production operations domestically. Different processes exist to indicate that a vehicle meets safety standards including type approval by a government authority or self-certification by the manufacturer and should be accompanied by market surveillance.

The second action area is in ensuring that safety features are maintained to ensure a high quality of safety throughout the entire life cycle of the vehicle, from its production, and after sale, through its maintenance and periodic technical inspection, and if applicable, movement to import or export. To this end, countries should utilize a combination of avenues.

Vehicle certification as basis for registration (and renewal or transfer of registration) is a key step to oversee compliance with safety standards required. Vehicle owners should be obliged to bring their vehicles for periodic technical inspections at regular intervals to ensure that the safety levels of their vehicles are maintained. In this regard, a key role of governments is to address through legislation periodicity and contents of these periodic technical inspections. UN agreements on vehicles to harmonize and facilitate mutual recognition of these inspections are instructive.

Countries should also identify all the avenues by which vehicles and/or vehicles’ parts can enter and leave different markets and provide through legislation requirement regarding minimum safety levels for vehicles and/or their parts at entry and exit points.

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| BOX 10: Recommended actions to ensure vehicle safety* Require high-quality harmonized safety standards for motor vehicles, safety belts, child restraint systems and motorcycle helmets, for example:
	+ Standards on frontal and side impact to ensure that occupants are protected in cases of a frontal and side impact crash;
	+ Safety-belts and safety-belt anchorage for all seats to ensure that safety-belts are fitted in vehicles when they are manufactured and assembled;
	+ ISOFIX child restraint anchorage points to secure the child restraint systems are attached directly to the frame of the vehicle and thus avoid misuse;
	+ Motorcycle helmets certified according to international harmonized standards for protection of motorcycle riders in cases of a crash;
	+ Electronic stability control to prevent skidding and loss of control in cases of oversteering or understeering;
	+ Pedestrian protection standard to reduce the severity of a pedestrian impact with a motor vehicle;
	+ Anti-lock braking system for motorcyclists and daytime running lights;
	+ Intelligent Speed adaptation to help drivers keep to speed limits
* Ensure that high- quality harmonized safety standards are kept throughout the full lifecycle of the vehicle. This can be done for example through:
	+ Mandatory certification and registration systems for new and used vehicles based on established safety requirements and combined with routine inspections;
	+ Establishment of regulations for the exportation and importation of used vehicles that are accompanied by inspections at entry and exit points; and
	+ Mandatory periodic technical inspection of vehicles, including through private inspection centers.
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### **Considerations for implementation**

As with all international legislation, there is a need to ensure that the legislative process does not stop at accession stage but is fully completed with all required steps, for example transposition into domestic legislation, adoption of complementary regulations, designation of relevant authorities, and implementation/enforcement of the provisions set in legislation transposed in particular in relation to the use of safety belts, child restraint systems and motorcycle helmets. As technology evolves, there is also a need to monitor new developments to assess periodically whether mandated regulation on safety standards should be adjusted to their latest versions of international legislation.

To ensure safety of all road users, regulations on vehicle safety and their application need to cover all types of vehicles (e.g. public transport, cargo transports) and go beyond the focus to date on private passenger vehicles.

Apart from entities involved in the regulation, manufacture, registration, inspection or trade of vehicles, other actors can significantly contribute to ensuring safe levels for vehicles. For example, fleet managers (including private companies and transport providers) have a particularly important role to play through their procurement practices while purchasing, operating and maintaining vehicles that offer advanced safety technologies.

## **Road user behaviour**

Addressing road user behaviour is a core element of the safe system approach. It is based on the understanding that the design and operation of the road transport system takes into account the behaviours of road users to ensure that human error and deliberate violations do not result in death and injury. There are different types of road users — pedestrians, cyclists, riders of powered two- and three-wheelers, as well as motor vehicle drivers — who interact during their travel on the road. The way these road users behave and interact can create or enhance injury risk to themselves and others who can get killed and/or injured. While the safe system design anticipates and compensates for inevitable human errors, there are deliberate behaviours that are not the result of human error—such as speeding, drink driving, non-use of protective equipment and use of a mobile phone while driving, that undermine the effective of the system, contributing to increased risk for crash, injury and death. Such behaviours should be addressed through additional measures such as road traffic legislation and in-vehicle technologies.

Out of the 12 global performance targets, six relate directly to road user behaviours:

* reduce by half the proportion of vehicles travelling over the posted speed limit and achieve a reduction in speed related injuries and fatalities (target 6);
* increase the proportion of motorcycle riders correctly using harmonized high standard certified helmets to close to 100% (target 7);
* increase the proportion of motor vehicle occupants using safety belts or harmonized high standard certified child restraint systems to close to 100% (target 8);
* reduce by half the number of road traffic injuries and fatalities related to drivers using alcohol, and/or achieve a reduction in those related to other psychoactive substances (target 9);
* all countries to have national laws to restrict or prohibit the use of mobile phones while driving (target 10); and
* all countries to enact regulation for driving time and rest periods for professional drivers, and/or accede to international/regional regulation in this area (target 11).

Other targets that related to road user behaviours:

* all countries accede to one or more of the core road safety-related UN legal Instruments (target 2);
* all new roads achieve technical standards for all road users that take into account road safety (target 3);
* more than 75% of travel on existing roads is on roads that meet technical standards for all road users that take into account road safety (target 4); and
* 100% of new (defined as produced, sold or imported) and used vehicles meet high quality safety standards, such as the recommended priority UN Regulations, Global Technical Regulations, or equivalent recognized national performance requirements (target 5).

### **Areas of actions**

To ensure safe road user behaviours, there are four action areas that governments should consider.

The establishment of and stringent enforcement of traffic rules for different road user groups is an important starting point for ensuring safe road user behaviour. These include rules for the general population as well as for professional drivers. In this regard, it is highly recommended that countries utilize and implement the 1968 Conventions on Road Traffic, and Road Signs and Signals, as well as the AETR Agreement. These rules and practices are often integrated in primary education but are also delivered as part of driver training courses which are sometimes required for licensing. For drivers of motor vehicles (including power two- and three wheelers), driver licensing systems are an important means of verifying not only the necessary skills and medical fitness to physically operate a vehicle in a road environment, but also the required knowledge and competencies of the drivers’ responsibilities under a safe system. This includes verifying minimum age requirements, vision, knowledge of traffic rules, as well as validation of driving skills. In some settings, restrictions and or limitations for novice drivers, also known as graduated driver licensing systems, are also included as part of this process. Mandatory liability insurance requirements can be an important source of motivation for drivers to comply with established rules and safe behaviours.

In addition to general traffic rules that govern the use of the transport system, there is a need to specifically address key behaviours such as drink driving and not wearing a helmet. Depending on countries, this will be done as part of the general traffic rules and/or as separate legislation that are enacted at national and/or subnational level. Legislation should include evidence-based provisions to prevent riskiest behaviours such as speeding, impaired driving, distracted driving or non-use of protective equipment (such as safety belts, child restraint systems and motorcycle helmets).

Road user behaviours are also greatly influenced by the way the transport system is designed, and as such, another key element of ensuring safe behaviours is the design of the road infrastructure. Road infrastructure design should take into account the needs of all road users and should be implemented in a way that is intuitive and easy to understand, to ensure that the easy and most obvious actions taken by road users, are those that are most safe. For example, the use of round abouts is a design feature that encourages slower speeds through intersections, making crashes that do occur less likely to result in severe injury and death. Similarly, bicycle lanes that are physically separated from motor vehicle traffic and pedestrian crossings that are clearly marked mitigate the impact of human error and reinforce safe road user behaviours that are aligned with traffic rules.

Similarly, vehicle safety features and technologies can contribute to ensuring safe behaviours among users, particularly drivers and passengers of motorized transport. For example, automatic safety belts and alerts reminding drivers and passengers to wear safety belts play an important role in ensuring seatbelt use. In-vehicle technologies such as intelligent speed assistance and automatic emergency braking (for cars and power two- and three-wheelers) can encourage compliance with speed limits and assist drivers in responding to sudden changes. Similarly, alcolocks have been used in some settings as a means of preventing drink driving while technologies to disable texting are being explored as means of preventing distracted driving. Additionally, it will be key to ensure awareness of and compliance with the international regulations of the transport of dangerous goods by road (where a high risk of major accidents exists, with potential may cause deaths and injuries and damage to property and the environment, e.g. spillage, explosion, fire or a toxic cloud).

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| BOX 11: Recommended actions to address road user behaviours:* Establishment of traffic rules and licensing requirements:
	+ Establishment of traffic rules and code of conduct for road users;
	+ Provide information and education on traffic rules;
	+ Set minimum age and vision requirements for drivers;
	+ Implement competency-based testing for driver licensing and adoption of graduated driver licensing for novice drivers;
	+ Set limits for maximum driving time and minimum rest periods for professional drivers
	+ Mandatory liability insurance for operators of motorized vehicles;
* Enact and enforce road safety legislation:
	+ Set maximum speed limits considering the type and function of roads;
	+ Establish blood alcohol concentration (BAC) limits to prevent impaired driving (drink and drug driving) with specific provisions for novice and professional drivers;
	+ Mandate the use of protective equipment (safety belts, child restraints and helmets);
	+ Put restrictions on the use of mobile phone while driving.
* Ensure road infrastructure that takes into account the needs of all road users and design that facilitates safe behaviours:
	+ Clear road signage and road markings that are intuitive;
	+ Use of round abouts and traffic calming designs such as speed humps;
	+ Physical separation of road users including use of bicycle lanes and pedestrian only zones;
* Make use of vehicle safety features and technologies to support safe behaviors including:
	+ Automatic seatbelts and seatbelt alerts;
	+ Intelligent speed assistance (ISA) and automatic emergency braking (AEB);
	+ Alcolocks to prevent drink driving;
	+ Technologies to disable texting and or other forms of distraction while driving.
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### **Considerations for Implementation**

Although the establishment of traffic laws is an essential part of ensuring safe road user behaviours, laws alone are not sufficient to bring about the expected reduction in road traffic fatalities. It is necessary to ensure that laws are enforced and appropriate penalties administered to deter drivers and other road users from committing road traffic violations or repeating such offences, and to increase the potential of laws to save lives. While there is clear evidence that enforcement is critical to the success of laws, the levels of enforcement required for maximum impact are often less readily available and depend on factors such as political will, available resources and competing priorities at a national level. With enforcement often unpopular with some segments of the population, police agencies and individual member need to be fully empowered and supported by government in their duty to prevent death and serious injury. As for all professionals implementing safe systems, police must be fully trained and compensated appropriately in accordance with the public service they provide.

Enforcement strategies must be backed up by a good communication strategy that can guarantee public support and the involvement of local stakeholders to maximize compliance and ensure that enforcement is evidence based. Similarly, steps need to be taken to prevent corruption in road safety enforcement, which undermines public support and legislative effectiveness. Systems can be introduced that include both high-tech solutions (e.g. camera enforcement) and low-tech policies (training, building police professionalism and hiring more female police officers).

In addition to actions by law enforcement authorities, other mechanisms should be used by countries to expand the scope of authorities who can oversee compliance with the rules. For example, corporations—public and private, can develop protocols ensuring safe operation of their fleets including through the allocation of reasonable delays for operation, monitoring driving behaviors of their professional drivers, including through control devices such as tachographs. Similarly, insurance companies can also influence behaviour with insurance premiums pricing based on drivers’ performance.

## **Post-crash response**

While the prevention of road traffic crashes would result in the elimination of injuries and deaths, the safe system approach recognizes that crashes will inevitably happen, and in some instances, these will result in serious injury. An efficient post-crash response is therefore an important part of the safe system to ensure that crashes do not result in death, and lifelong disability. Injury care is extremely time-sensitive: delays of minutes can make the difference between life and death. For this reason, appropriate care should be provided as soon as possible after a crash occurs in an integrated and coordinated manner. In this regard, mechanisms should be put in place to ensure that appropriate actions are taken as soon as possible when an injury crash occurs.

Of the 12 global performance targets, one relates directly to post-crash response:

* all countries establish and achieve national targets in order to minimize the time interval between road traffic crash and the provision of first professional emergency care (target 12).

Other targets that relate to post-crash outcomes include:

* reduce by half the proportion of vehicles travelling over the posted speed limit and achieve a reduction in speed related injuries and fatalities (target 6);
* increase the proportion of motorcycle riders correctly using harmonized high standard certified helmets to close to 100% (target 7);
* increase the proportion of motor vehicle occupants using safety belts or harmonized high standard certified child restraint systems to close to 100% (target 8);

### **Areas of actions**

To enhance the post-crash response and minimize disability, there are four areas of actions that governments should consider.

The first action area relates to the provision of a system to activate an emergency response in case of a crash. In this regard, governments should ensure that where a crash happens, emergency services can be alerted and dispatched appropriately. This starts with a system of alert (emergency telephone number(s) with national coverage) connected to relevant professionals who are in turn able to coordinate across services to dispatch quickly appropriate emergency services (fire brigade, police, ambulance). Requirement for installation of automated emergency call systems in vehicles (AECS or e-call) will help to minimize the time between crash and emergency alert.

The second action area relates to developing the capacity for response for lay responders (non-medical professionals). Basic (EMS) training for lay providers should be promoted to expand timely access to simple lifesaving interventions – especially in areas where prehospital services are limited and/or response times are long. A specific focus should be on training the lay providers whose occupations frequently put them at the scene of crashes, for example, policemen, firefighters, taxi drivers and public transport providers. To encourage actions by these first responders, countries should provide them legal protection (good Samaritans laws).

The third action area relates to strengthening professional medical care. This includes the establishment of trauma registries, building capacity of pre-hospital, hospital and rehabilitation care/services as well as ensuring access to and financing of care so that people can access emergency care regardless of their ability to pay.

The fourth action area relates to the provision and conduct of multi-disciplinary crash investigation. To inform prevention strategies and apply an effective legal response to victims and their families, governments should also require and develop mechanisms to provide for multi-disciplinary crash investigation.

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| BOX 12: Recommended actions to improve the post-crash response:* Provide a system to activate post-crash response:
	+ Emergency telephone number(s) with national coverage;
	+ Coordination mechanism for dispatching response (fire brigade, police, ambulance).
* Build capacity for response for lay responders (non-medical professionals):
	+ Provide basic (EMS) training for lay providers such as taxi and public transport providers, police, fire brigade etc.;
	+ Establish formal certification for pre-hospital providers;
	+ Enact Good Samaritan Laws to ensure protection for lay responders.
* Strengthen professional medical care:
	+ Establish trauma registries within health care facilities to gather information on the cause of injury and clinical interventions;
	+ Build capacity of pre-hospital, hospital & rehabilitation care/services and establish a basic package of emergency care services for each level of the health system;
	+ Ensure 24-hour access—regardless of ability to pay, to operative and critical care services that is staffed and equipped; and
	+ Provision of recovery and rehabilitation services – to provide early rehabilitation and support to injured patients to prevent permanent disability.
* Establish requirements multi-disciplinary post-crash investigation:
	+ Mandate investigations for crashes resulting in serious and fatal injuries to inform prevention strategies and apply an effective judicial response to victims and their families;
	+ Put in place coordination mechanisms for post-crash investigation and sharing of data by relevant sectors.
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### **Considerations for Implementation**

Effectively managing a coordinated response system involves several institutions and personnel. Roles and responsibilities should be clearly assigned. Accountability, transparency and efficiency are critical in managing the entire chain of care triggered in the post-crash response. An important starting point is to identify gaps and opportunities within the existing post-crash response system. This can be done using a standardized national assessment of the emergency care system (e.g., WHO Emergency Care System Assessment, or similar) that is followed by the development of action plan. WHO has established consensus-based standards on essential functions of emergency care systems and an associated assessment tool for use at national level. Organizational, equipment and governance gaps persist and cost lives even in highly resourced systems. Standardized assessment ensures that critical system functions are accounted for and helps set high-impact feasible priorities for action.

# PART V: MONITORING and EVALUATION

This part deals with the monitoring and evaluation at the global level of the progress and outcomes of country implementation. Monitoring and evaluation of activities conducted at national and local level have been covered in section 3.

**Monitoring**

The global status report on road safety will be the main mechanism for monitoring progress of the Decade. Information for this report is collected through a survey administered to Member States in which they provide details on the number of traffic deaths and injuries, status of traffic laws and their enforcement, and road safety organizations. In addition, information is collected from existing databases on population, vehicles and UN conventions.

**Evaluation**

As indicated in UN General Assembly resolution (RES 74/299), at least a 50% reduction in the number of road traffic deaths and serious injuries is called for during the Decade of Action. A change in absolute number of people killed and seriously injured in road traffic crashes will be the starting point for analysis. With latest estimates showing approximately 1.3 million road traffic deaths annually, the targeted reduction in the number of deaths will be in the order of 650,000.

Though RES 74/299 expects a change in the number of people seriously injured in road traffic collisions to be shown, currently there is no comprehensive database with this information. Definition and measurement of serious injuries is problematic in many countries. An effort will be made to address these issues and show progress in any countries that take actions to collect robust data on serious injuries. The key monitoring and evaluation outcomes, sources of data and timeline are presented in Table 1.

As it can be noted, the evaluation of this DoA comprises outcome and process measures. The assessment of process is especially important in view of the time lag in reporting of road traffic deaths and injuries as well as the likelihood that the reductions observed in many countries will not occur at the same pace. In some instances, the improvements made in policies may not yield results immediately, and it is therefore important to capture process improvements even though their full impact on deaths and injuries will not have been observed.

Though the evaluation of the Decade will be at the global level, countries should evaluate their national and local plans as pointed out in Part 3. Countries and all stakeholders are therefore expected to evaluate their programmes routinely and use these findings to inform planning and implementation.

**Table 1: Monitoring and evaluation outcomes**

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| Baseline year | 2021 | Stated in UNGA resolution |
| Main outcome indicator | Number of people killed and seriously injured in road traffic crashesNumber of road traffic deaths and injuries per 100 000 population | A key road safety outcome |
| Other outcome indicators | Number of deaths per 10000 vehicles or 100 000 000 vehicle-kilometre travelledYears of life lostYears lived with disability | Other outcome indicators that will be explored |
| Process indicators | Implementation planning and rollout:* Development of national plans
* Resources allocated
* Human resource capacity
* Coordination & engagement of diverse sectors and actors
 | To be conducted at mid-term and end of the Decade to gain insights into how the Decade have been implemented. Interviews, surveys, review of documents and case illustrations will be used to collect information |
| Data sources | Global status report will be the main source of data.Other sources will be UN Regional Commissions, the Global Burden of Disease, World Bank and Regional Observatories | Main source of data used for DOA1 evaluation; still relevant for new Decade |
| Timeline | * 2021: baseline assessment
* 2025: Mid-term evaluation
* 2030: End of Decade evaluation
 | Internal and external evaluation will be conducted |

**Box 13: Collection and reporting on road traffic deaths**

**Box 14: Global Voluntary Performance Targets**

# PART VI: WAY FORWARD

The proclamation of the Decade of Action for Road Safety 2021-2030 was positively received by the road safety community. Looking ahead to 2030 is exciting but there is a lot of work to be done to achieve the target that has been set.

This Decade should continue to build upon the safe system approach in order to achieve widespread and sustainable change. Strengthening the governance of safe system approach will ensure that the technical tools available, including UN legal instruments, are effectively implemented as part of a coherent and continuous cycle of improvement. It will also involve the integration of road safety into activities contributing to the SDGs and in the daily operations of a far-ranging group of public and private sector organizations.

The diversity of contexts and geopolitical situations around the world reinforces the importance of regional and national collaboration – including opportunities to establish—where desirable, regional targets and or strategies to address common challenges. This approach of regional collaboration and coordination may also be useful in addressing broader challenges related to sustainability practices and policies that extend beyond national boundaries. In these situations, collaboration can also offer an opportunity to amplify the voice of individual countries. Through the establishment of regional networks and alliances, countries increase their leverage during interactions with multi-lateral and multi-national organizations.

The United Nation system has a key role in providing leadership in the implementation of this plan as well as for ensuring a coordinated approach for road safety that brings together the influence, knowledge and resources of the United Nations as a whole. The United Nations Secretary-General’s Special Envoy for Road Safety will continue to play a critical role in galvanizing political momentum and mobilizing action among multiple sectors towards the implementation of this plan. The United Nations Road Safety Fund will continue to provide strategic financing as a means of leveraging public and private investments in road safety. At the country level, the UN Resident Coordinators have an important role in galvanizing the UN Country Teams and host governments to act during the Second Decade.

The United Nations should lead by example and commit to reducing by at least 50% the number of deaths and injuries due to road traffic crashes—which are also the leading cause of work-related deaths within the United Nations. The United Nations Department of Safety and Security has developed a road safety strategy for UN agencies. It will continue to implement this strategy, within a safe system approach, during the Decade to reduce the number of road traffic deaths and injuries involving UN personnel. The 2nd Global Sustainable Transport Conference in 2021 and upcoming High-Level Meeting on Road Safety expected in 2022 will provide another opportunity to solidify commitment to the achievement of the 50% reduction.

As we pursue this essential path, it is critically important that governments increase their efforts, both in direct response to road safety problems in their jurisdictions and to engage active support of their Sustainable Development Goal partners. Countries must ensure political commitment and responsibility at the highest level, the adequate domestic financing for road safety, across sectors, and establish regional, national and subnational strategies and action plans for road safety and contributions from different governmental agencies as well as multi-sectoral partnerships to deliver the scale of efforts required at regional, national and sub-national levels to achieve SDG targets, and that these strategies and efforts are transparent and public. Through the combined efforts of governments, all those engaged in the road safety movement, the achievement of the target of halving road deaths and serious injuries by half by 2030 is feasible.

BOXES:

**Box 1: Road Safety and Sustainable Development**

The United Nations 2030 Agenda for Sustainable Development, adopted by all Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet. The Agenda is based on 17 Sustainable Development Goals (SDGs) and 169 indicators. Unlike the Millennium Development Goals, SDGs include two targets that relate to road safety: one in Goal 3 (on health); and one in Goal 11 (on sustainable transport in cities and human settlements).

Integrating road safety targets 3.6 and 11.2 into the SDGs was a remarkable accomplishment with far-reaching implications. Because these Goals are defined as indivisible and mutually dependent, the explicit citation of road safety in the Health and Well-Being and Sustainable Cities goals means that road safety can be integrated across the goals, and especially in those addressing climate, equity, education, and employment. This type of integration is is an important step toward embedding road safety expectations and activities into the far-ranging daily processes of governments and in the operations of corporations, businesses and civic organizations globally.

The road safety community needs to utilize opportunities created by SDGs to expand its reach and influence during the Decade. This effort is necessary in view of the fact that substantial levels of widespread integration of road safety into SDGs are yet to be achieved. As an independent endeavor, the road safety movement is limited in potential reach and influence. Positioned as a special interest, road safety is often subordinate to other social needs and can gain progress only where it can achieve attention by road users or those who make decisions about roads and vehicles. But if recognized as a necessity that can facilitate progress in meeting social needs ranging from gender equity to environmental sustainability, the potential of road safety can be greatly expanded.

**Box 2: The impact of Road Safety on Children**

Our children are our most valuable societal asset and we cannot look into the future without special consideration for their welfare. This principle underlies the development of the UN declaration of children´s rights. While mortality among children less than 5 years of age is down over the past decades, the children of today are the first in history to have a predicted lifespan shorter than that of their parents. Recent decreases in overall life expectancy have resulted from other factors, but motor vehicle crash deaths remain the leading cause of death globally for ages 5-29.

Another substantial risk to child health, lack of physical activity, is related to road safety in that the safety of roads affects decisions about when and where children will walk or bicycle. Both road safety and the frequency of physical activity could be improved by a few common measures. Widespread adoption of compact living centers and highly connected neighborhoods that reduce dependence on motor vehicles could facilitate both the frequency and safety of walking and bicycling for daily transportation. This type of physical activity as a regular routine is particularly beneficial to health.

Child safety legislation has often served as an introduction to the concept of traffic rules and their enactment has increased the willingness of citizens and policymakers to take further legislative steps that extend protection to the remainder of the population. Examples of child-specific safety legislation include child safety seat laws for infants and toddlers, booster seat and seat belt laws for older children, prohibitions against carrying children in cargo areas of trucks, bicycle helmet laws, bans on carrying children too small to reach footrests on powered two-wheelers, and enhanced penalties for drink-driving if children are in the vehicle.

Infrastructure design needs to accommodate the special needs of children, particularly the younger ones, who cannot be expected to understand and comply with non-intuitive rules or behaviors. Routes traveled by children should use designs such as separated pedestrian walkways to limit risk exposure and include safe crosswalks where children are likely to feel the need to cross the road. Schools have an important responsibility to analyze, propose and support implementation of safe routes to the schools.

In many countries, children are frequent passengers on powered two-wheelers. Because of the inherent risks of this mode of travel and because smaller children are at particular risk since they often situated on the vehicle in an unstable manner, the goal should be to provide safer modes for child mobility. However, when families have no choice other than a powered two-wheeler for child mobility and needed changes such as transportation planning will take substantial time, countries and local jurisdictions should consider measures that could reduce the risk for children on powered two-wheelers in the shorter term. Such measures could include helmets for children, special lower speed limits for powered two-wheelers carrying small children, or route restrictions that would prevent these vehicles from traveling on busy or higher speed roads where alternatives are available.

**Box 3: ITC Recommendations for Enhancing National Road Safety Systems (to-be re-drawn by designer)**

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On 1 April 2020, the Inland Transport Committee (ITC) of UNECE formally recommended to all countries and international organizations the road safety system concept, as illustrated in the diagram on national road safety system, after extensive discussions at UNECE/ITC working party and expert levels.

The ITC Recommendations give a comprehensive picture of national road safety systems that include all key elements at the national level with international support to effectively:

• Prevent accidents

• Protect people in accidents, if prevention fails,

• Rescue people after accidents and

• Learn from the accidents.

The foundational principle of the system concept is that the elements of the system – pillars and areas – are not isolated and independent. They are interconnected and support each other, thus covering the safe system approach that is integrated in the ITC Recommendations. This integrated approach allows for improving one or more elements but always within the big picture of the system and for promoting systemic long-term solutions. It also offers a tool for prioritizing interventions in a systematic way.

This system concept, as the core approach in achieving the SDG 3.6 on road safety in the decade until 2030, is critical in the efforts to improve the road safety trends, especially in low- and middle-income countries, and to coordinate national and international actions.

International regulatory support at the international level - through the adoption and implementation of the United Nation Road Safety Conventions – is critical to ensuring harmonized national solutions for a common international system. Thus, in promoting national solutions, countries and national authorities do not “reinvent the wheel”, but rather prioritize and select systematically ‘best-fit’ solutions for their national and regional circumstances, while remaining harmonized and compatible with the broader system and international regulatory landscape.

**Box 4: Speed management within the safe system**

The management of speed lies at the heart of the ‘safe system’ approach, because speed is the toxin which causes death and injury as the forces impacting human bodies in crashes are proportional to an exponential function of speed (Speed). Speed not only generates the severity of crashes but also contributes directedly to crash occurrence. Higher speeds increase stopping distances; higher speeds leave less time for people to judge and react to avoid a crash; higher speeds risk other road users misjudging gaps; and, higher speeds generate forces which limit the ability of a vehicle to negotiate a curve leading to run-off-road or head on crashes. Thus, it is not surprising that global synthesis studies show that each 1% decrease in speed will generate on average a 4% decrease in fatalities.

Improved management of speed is sometimes resisted for political reasons as well as arising from misinformation, such as the belief that higher speeds are better for the economy or that higher speed limits will inevitably reduce congestion. Lower speeds deliver reduced economic costs of crash trauma, as well as other economic synergies, including reduced vehicle maintenance costs, greenhouse gas emissions, reduced health effects of road traffic noise, and reduced air pollution. These benefits typically outweigh the smaller economic impacts on travel time changes. Thus, speed management interventions offer powerful benefit: cost ratios, typically generating many dollars in crash cost savings alone for each dollar invested.

Speed management interventions are possible across a range of arenas of road safety, including road design and engineering (for example, employing speed humps or cushions, raised platform crossings, roundabouts, chicanes, as well as safe speed limits), vehicle interventions (speed limiting, Intelligent Speed Adaptation or ISA), and behavior change (legislation, enforcement and promotion to deliver effective general deterrence of speeding).

The effective integration of these often-fragmented efforts will improve speed management and deliver more powerful cost-effective outcomes. Each of these interventions match different circumstances in which they are most effective, and thus systematic integrated selection of interventions from the available suite of options maximizes benefits. For example, the road engineering measures are most suitable in lower speed context but are less suitable on higher speed roads; vehicle based interventions take time to generate value especially in countries which import mainly second hand vehicles, but are being applied in Europe; enforcement, including automated enforcement, is most effective in countries with little corruption, effective judicial and administrative systems.

**Box 5: Procurement Practices & Road Safety**

Corporations, businesses and government organizations have tremendous influence on society through a range of factors, from political influence to the nature of their consumption of products and services. A substantial component of this influence is by means of their spending on the goods and services necessary for their function. Government procurement is estimated to be 10-15 percent of Gross Domestic Product on average, with some analyses showing that the GDP-portion of public procurement in low-income nations is slightly higher than that in high-income countries. The social influence of this spending, if directed to incentivize sustainable practices and investments – including road safety, would be substantial.

Both government and corporate spending is directed to a value chain - the full scope of activities to bring a product or service from conception to delivery. For companies that produce goods, the value chain starts with accessing raw materials used to make their products, and includes every other step including distribution and use by purchasers. Corporate and government services have similar value chains, including the tools, materials and contracted services needed to conduct and disseminate their function. Each expenditure across the value chain could be used to improve road safety. For example, contingencies could be placed on procurements based on suppliers’ policies or performance with regard to:

• Specifications for vehicle safety levels, including powered two-wheelers, to be used in carrying out procured services including the purchasing of government fleets;

• Requirements for training of drivers involved in performing procured services, including those who ride powered two-wheelers and other motorized personal mobility devices;

• Expectations for road safety monitoring, reporting and performance;

• Standards for scheduling and planning procured driving operations, including practices to manage driver fatigue, use of low risk roads, use of lower risk vehicles, and improved times for travel.

When a government controls the safety behaviours of individuals, the burden of enforcement is on the government and as a result there are certain tolerance levels and inconsistencies in compliance. But when a government deals with a provider of goods or services, and road safety is an integral part of the contract, the burden of enforcement is delegated to the provider. The firm that is supplying the goods or services is motivated to keep the contract and compelled to comply with its terms as one of its primary objectives. Thus, it is important that businesses contracted in public procurement demonstrate their capability to comply with safety standards, including having a system to monitor and correct incidents of non-compliance. This example of governance decentralizes monitoring of road safety compliance and can lead to widespread culture change.

**Box 6: Gender Perspectives in Safe Systems Implementation**

Globally, women have 47% higher risk of serious injury in a car crash than men. For example, women are at a 5 times higher risk of whiplash injury. The intrinsic gender differences in the skeleton may be one of the possible reasons for higher incidence in females. However, most of regulatory tests assessing vehicle occupant safety only use models of the average male, and so do not reflect the specific physical features and needs of women.

Despite the higher vulnerability of women during a crash they are far less likely to die in one than men. When they are killed it is usually in different circumstances – as pedestrians and car passengers rather than car drivers and motorcycle riders. This in part reflects the greater number of motorized journeys taken by men. It also reflects gender differences in taking risks. Women are generally more concerned about risky behaviour, and less likely to engage in it. It has been estimated that if all road users used the roads like females do now in their respective countries, the road mortality rate across the EU would be about 20 percent lower than the average, which would itself bring many additional economic and social benefits.

There is evidence too of the impact of road safety risk on female mobility patterns more generally. Women are more likely to walk and take public transport because they have less access to motorized transport and are less likely to cycle because of the safety risks they perceive. Improved road safety and personal safety for women and young girls are therefore both fundamental to increasing the levels of walking, cycling and a range of other actions for sustainable mobility in cities which are so crucial to addressing our shared climate challenge. Only a gender-inclusive transport system can really deliver sustainable mobility. The following should therefore be considered as part of the implementation of the safe system:

• Improved road safety should be acknowledged as a basic necessity that can facilitate progress in meeting many aspects of the Sustainable Development Goals, and in particular as a means to open opportunities for women of all ages;

• A deeper understanding of the issue of road safety is essential in future planning, especially for the second Decade of Action for Road Safety. Countries need valid and official information resources, disaggregated by gender and age.

• Transport policy frameworks must provide an enabling environment for both men and women to share safe, secure, accessible, reliable and sustainable mobility, and non-discriminatory participation in transport.

• More women must be involved in the transport sector and its processes – as operators in transport systems, as decision-makers in the development of regulatory & policy systems, as engineers and designers, and everywhere in-between.

• There must be greater focus on gender differences in the design and construction of all aspects of transport infrastructure. For example, vehicle design needs to be modified to accommodate the differences in ergonomics between the genders - EvaRID dummy is a good example of how this might be achieved once this dummy has been successfully validated for regulatory testing.

**Box 7: Safe Systems Implementation in Resource Limited Settings**

Low- and middle-income countries (LMICs) are facing a major challenge in road safety: the upward trend of road crash fatalities and injuries, causing human suffering, grief, and loss, and retarding the economic growth of LMICs. Efforts to implement road safety interventions are largely fragmented, lack coordination, and are often not data-driven or evidence-based. A clear understanding of the current road safety situation is a critical step in the reduction of road crash fatalities and injuries through data-driven evidence-based interventions. Many vital metrics of road safety performance are not measured effectively in developing countries: this includes the actual number of road crash fatalities and injuries, specific road safety problems (for example, helmet wearing, speed, hazardous roadsides, and pedestrians without footpaths), and the current capacities of societies and authorities. The absence of valid, representative data presents profound challenges to developing an understanding of the nature of the problem and to developing and implementing the necessary countermeasures and implementation strategies to address the actual burden of road crash fatalities and injuries.

The Safe System approach is of critical importance not only for developed areas but also for developing nations and cities. The global trend toward urbanization will cause widespread expansion of cities and create new urban areas in coming decades. The United Nations Department of Economic and Social Affairs predicts that urban areas will grow by more than 50 percent over the coming 30 years, with the great majority of this expansion occurring in Africa and Asia. New roads and infrastructure will be necessary to accommodate the urban expansion and this creates an opportunity to incorporate Safe System design features from the beginning.

Change in low- and middle-income nations has been slower and governments in these nations need to take a deeper look at their situation and address this issue, with help from external partners as the situation requires. While the Agenda 2030 looks to governments for lead responsibility, strong and sustained efforts from the private sector are important for achievement of the goals and targets. Business underlies 84% of the GDP and 90% of the jobs in developing countries and, by utilizing their full value chains, can make a substantial contribution to the safety of those who are at greatest risk for a range of threats including road crashes.

**Box 8: Modal shift**

The rate at which transport is becoming motorized is not sustainable; currently exceeding one billion, the world’s fleet of motor vehicles is likely to at least double by 2030. As such, transport and land use planning along with mobility policies should be used to shift travel from the private car toward cleaner, safer and affordable modes incorporating higher levels of physical activity such as walking, bicycling and use of public transit. Policies that promote compact urban design and prioritize access by pedestrians, cyclists and users of public transport can reduce use of personal motorized transport, carbon emissions, traffic congestion as well as health care costs, while improving health, community well-being and quality of life.

Investments in public transport or mass transit systems to facilitate safe and efficient movement of large populations is central to optimizing the performance of transport systems. Public transport systems like the bus, tram and commuter train offer a number of comparative advantages over other modes: they carry more people compared to private cars, they are generally more affordable, they can serve transport needs of scattered population living in rural areas. They reduce exposure level and are a key avenue to improve safety as stressed in SDG target 11.2. In addition to providing infrastructure and services for public transport, countries need to cater for walking and cycling to make it possible for people to use these modes for short-distances and at the same time use the bus, train, private car and water transport for long-distances. The availability of parking for bicycles and private vehicles at bus stops, train stations and airports for example, can facilitate multimodal commutes.

Transport planning should be adapted to local contexts and will result in a mix that is different depending on the setting. While developing safer and efficient public transport systems is needed in some countries, in others, the focus should be on integrating road, railway and water modes of transport. Transport and land- use planning are the primary means through which to optimize the safety of the mix of modalities in transport systems. By encouraging a modal shift towards public transport and active modes of transport, the negative effects of transport such as road traffic deaths and injuries, air pollution, high fuel consumption and traffic congestion will be steadily addressed to create transport systems that enhance the quality of life.

**Box 13: Collection and reporting on road traffic deaths**

The WHO Global Status Report on Road Safety (GSRRS) published by WHO since 2009, has shown that the main obstacles to collecting accurate data are myriad and most often linked to the availability of data generated by civil registration and vital statistic (CRVS) systems, linkages between different sectors (health, transport, police) as well as the definitions used and the ways that deaths are coded in different countries. Many countries have poor CRVS systems or no systems are in place at all. This means that there is no one registry for death data that incorporates different sources of data for road traffic fatalities (police, insurance, health sectors). This leads to inconsistencies and differing definitions of what constitutes death from a road crash.

The main challenges and limitations involved in the collection of road fatality data can be summarized as follows:

• Data accuracy: there is often inadequate coverage of fatalities and injuries, known as under-reporting. Many sectors, especially the traffic report deaths by crash and not case-based (the actual number of deaths)

• Data comparability: different definitions may be used by different sectors, and the definitions used may not align with international standards.

• Data completeness: there is a lack of several key data elements required to support policy making, and it has been noted that the most useful data are often the least available (e.g. crash location, injury type, alcohol or drugs impairment, use of seat belt or helmet).

• Level of disaggregation: it is often not possible to analyze the data - per different road, vehicle or user characteristics separately in various combinations.

• Data access: the information may be inaccessible or lacking the necessary meta-data (e.g. description of definitions and protocols used.

In 2018, according to figures reported in the GSRRS, half of all countries shared an official statistic based that number only on data reported by police. When these numbers are compared to what is reported in vital or civil registration which includes data reported through the health sector, there is often a big gap. To address this, countries can implement specific actions to improve civil registration and vital statistics (CRVS) data systems and/or road traffic injury data collection including:

• Ensure that CRVS systems produce high-quality cause of death data by working with the health sector to improve medical certification of cause of death and statistical coding in line with the ICD.

• Adopt a consistent definition of a road traffic death for use in police databases, particularly in countries with incomplete CRVS data, where police data are the most reliable source of information

• Linking data sources – including civil registration records, police data, health records, insurance data – to improve official road traffic fatality estimates.

**Box 14: Global Voluntary Performance Targets (to be re-drawn by designer)**

