United Nations Road Safety Trust Fund

Global Framework Plan of Action for Road Safety

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Geneva
Towards improving road safety

Global Framework Plan of Action for Road Safety

As the way to effectively and efficiently support national efforts for road safety and guide international assistance underpinned by the United Nations Road Safety Trust Fund

I. Introduction

While measured progress in improving road safety has been made in some countries in the last decade, the overall global results are far short of the changes that are urgently needed to reduce a large number of global road fatalities and injuries. Road traffic injuries constitute the first cause of accidental death globally. Road traffic crashes are responsible for more than 1.3 million deaths each year, while estimates of non-fatal injuries range from 20 million to 50 million. The General Assembly, with particular reference to resolution A/RES/72/271 of 12 April 2018, expressed the concern that, at the current rate of progress by member States, the target 3.6 of Sustainable Development Goal 3 will not be met by 2020. Enhanced international and national efforts are urgently needed to harness and improve the safety situation on roads. A new plan, vision and leadership are particularly needed to enhance road safety globally, taking into account the past good practices and lessons, experience from other modes of transport, and special characteristics of mobility by road.

II. Past good practices and lessons

Since the 1950s the West European countries have seen a rapid growth in motorization. An important externality of this growth was an increase in road traffic crashes, fatalities and injuries. Countries responded with actions to address this negative externality. They concentrated on enhancing traffic management and improving safety systems.

More importantly, instead of working individually on improving road traffic safety, countries took joint action. They formulated under the auspices of UNECE a series of United Nations legal instruments (conventions) (Box 1) which provide elaborated unified rules and regulations to organise and manage road traffic, road infrastructure and vehicle safety. These Conventions are managed by Working Parties which with the help of the UNECE secretariat update them as necessary to maintain their relevance and pertinence to changing conditions resulting from technological progress, research and development. The Working Parties, which have global membership, also provide a forum to exchange best practices and lessons learned from the implementation of the Conventions.

At a national level, countries have developed the convention-based legislation to form internationally harmonized safety systems, put in place measures to enforce that legislation as well as introduced measures to educate and inform road users about regulations and standards in force to enable appropriate road behaviour. This work has brought about the desired results. The road traffic deaths after peaking in the late 1960s, started to steadily decrease, despite the fact that the number of vehicles or volume of motorized traffic continued to grow. The overall reduction trend was clear (see Figure 1 for a country example).

1 To halve, by 2020, the number of global deaths and injuries from road traffic accidents.
Box 1. United Nations legal instruments (conventions) on road safety

The key United Nations road safety legal instruments are:

- 1949 Convention on Road Traffic
- 1968 Convention on Road Traffic
- 1968 Convention on Road Signs and Signals
- 1970 European Agreement concerning the Work of Crews of Vehicles engaged in International Road Transport
- 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 (Revision 3)
- 1997 Agreement concerning the Adoption of Uniform Conditions for Periodical Technical Inspections of Wheeled Vehicles and the Reciprocal Recognition of Such Inspections
- 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
- 1957 European Agreement concerning the International Carriage of Dangerous Goods by Road

Figure 1: Overall trend in road traffic fatalities and volume of motorized traffic, example from France
Source: Road Safety in France, Annual Report, 2012
Many countries strived however for further improvements. This is how the concept of a safe system approach for road safety originated in Sweden and the Netherlands in 1980s and 1990s. This approach takes into account human failings and requires that not only the users are responsible for complying with traffic rules but that joint responsibility is borne also by all actors involved in design, construction, maintenance and improvements of roads and vehicles as well as organisation of post-crash response so as to ensure highest road safety performance. The International Transport Forum (ITF) organized more than 30 road safety experts to continue contemplating on a safe system approach in 2014-2016 and published a report in 2016 (Box 2). The European Union set its vision of zero fatalities and proposed recently a safe system approach to help accomplish that vision.

The low- and middle-income countries started to experience a rapid growth of road traffic fatalities during the 1990s as a function of rapid increase in motorization. However, in contrast to the West European experience, the fatalities instead of declining after that rapid growth period of 1990s continued to grow following a S-curve trend. A steady growth has been continuing for nearly two decades (as postulated in Figure 3).
Reviewing the past efforts in low and middle-income countries, special focus has been given to specific road safety issues, e.g. selected risk factors, without pursuing what should have been the overall goal to build and gradually implement comprehensive national road safety systems based on well elaborated international regulations in the context of the safe system approach. Despite attempts – proclamation of 2011-2020 as the Decade of Action for Road Safety and elaboration of a plan of action to guide the activities – international support has not effectively fostered actions to complement one another in assisting countries to build comprehensive systems: systems, in which sound and complete national legislation establishes the basis for comprehensive action by all actors with responsibilities for road safety, following the safe system approach. Instead, insufficient coordination across international organizations, international financial institutions, national governments of United Nations member States, the private sector and civil society has rather resulted in fragmented action using scattered funding (Figure 4). This has brought about unsatisfactory results.
The past efforts in supporting the national work in the low and middle-income countries have not taken enough advantage of the availability of the United Nations road safety conventions, which when put together, establish a solid legislative basis needed for road safety actions by various national actors in the context of the safe system approach.

At the same time, it has been evident that the countries which created national road safety systems based on the international regulatory framework - in particular the United Nations legal instruments – in the context of the safe system (Box 2) are among the best performers in road safety. It is worth stressing that the safe system provides the necessary holistic approach. It, however, would not work if separated from the regulatory basis without which the system responsibilities for safety performance of the different actors could not be established. The development of national systems on the basis of the commonly agreed international regulatory framework provides another advantage. It leads to a creation of comprehensive and harmonized national systems in the context of the safe system, in which road safety is not compromised when people travel internationally.
III. Towards improving road safety

Box 2. Safe System Approach

The Safe System Approach, at its heart, is about designing roads, vehicles and any new mobility technology that enters the system to be forgiving of human fallibility*. 

The Safe System principles acknowledge that people make mistakes in traffic and there are known limits to the capacity of the human body to absorb kinetic energy before harm occurs. A Safe System requires understanding and managing the complex and dynamic interaction between operating speeds, vehicles, road infrastructure and road user behaviour in a holistic way. The aim is that the sum of the individual parts of the system combine for a greater overall safety effect in which another part will prevent serious injuries even where one part fails.

In a Safe System, road users bear the responsibility to obey traffic rules and use roads with due care for safety. Those responsible for designing, building and operating the road system and vehicles (the “system designers”) bear responsibility to ensure it encourages and supports safe use, addresses inherent safety risks, anticipates errors that users will make and ensure they do not result in serious harm. A safe and sustainable speed management and limit system that safely manages the interaction between vehicles, users and road infrastructure is another key feature of a Safe System. As crashes will still occur, optimal emergency response and post-crash medical care are part of a Safe System to prevent injuries from having serious health consequences and to ensure optimal recovery.

*Source: Zero Road Deaths and Serious Injuries: Leading A Paradigm Shift to a Safe System
The future should thus see a more enhanced effort towards creation (and assistance to creation) of comprehensive and effective national road safety systems. This should be founded on the international regulatory framework following the holistic approach of the safe system. In addition, the newly established United Nations Road Safety Trust Fund (UNRSTF) should support this coordinated effort, building on the safety system considerations, as it was agreed during the consultation on the objective of the Trust Fund (Figure 5). The Consultation Paper stressed the importance of a holistic approach with the Safety System principles. The Terms of Reference further stated that UNRSTF will apply a holistic and integrated approach by recognizing the Safety Systems principles and promote cost-efficient approaches.

Figure 5. Possible future architecture in support of road safety

The comprehensive and efficient national road safety system building on the international regulatory framework, good practice and experience consists of five pillars. They are:

1. Road safety management (or the bridging pillar)

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2. Safe user
3. Safe vehicle
4. Safe road
5. Effective post-crash response, and

In the road safety management pillar, action needs to focus on target setting, vertical and horizontal management as well as monitoring. Further action under this pillar should focus on coordination with other efforts linked to ensuring high-quality living conditions and mobility of the population covered through land use planning policies and mobility policies. While the work across the pillars and areas will be done by specific bodies, coordination of their work through road safety management may be enhanced by setting up a lead agency for road safety or designating a ministry to coordinate road safety, or it may be ensured by the national government.

In the other pillars, action needs to focus in the following areas:

a) Legislation – to have a clear basis for enhancing road safety as well as to designate responsible agencies for enforcement, education and monitoring

b) Enforcement (including inspection and audits as appropriate) – to make sure that rules, regulations and standards are observed and/or implemented

c) Education – to make sure that rules and regulations are known and so can be applied

d) Technology – to complement and strengthen other areas to increase the system’s effectiveness

e) International Regulatory Support – to provide international legal framework and institutional platforms to support the work in other areas.

The compilation of all actions across the areas and pillars formulates a New Global Framework Plan of Action for Road Safety, whose aim is to serve any country in establishing or enhancing its national road safety system (Figure 6). The order of the pillars, in particular, of safe user, safe vehicle and safe road pillars does not suggest any particular preference of one pillar over another. Following the safe system, these pillars are equally important to achieving roads safety. However, work in none of the pillars should be neglected as this would compromise creation of a sound holistic national road safety system. At the same time, countries may prioritize national action in the pillar in which taking action at the start would bring about the highest road safety impact for them.
IV. Relationship to the Global Plan for the Decade of Action for Road Safety 2011-2020 and the 12 road safety global voluntary performance targets

The Global Framework Plan of Action for Road Safety builds on the Global Plan for the Decade of Action for Road Safety 2011-2020 by using five pillars for road safety as the essential blocks for creating a national road safety system. These pillars are integrated in a comprehensive and sustainable system complemented and assisted by international coordination.

The Global Framework Plan of Action is to serve as a benchmark for establishing national road safety systems. In this way, the current Plan offers more specific actions. It also incorporates any action that is necessary to attain the 12 road safety global voluntary performance targets\(^4\). To this end, chapter V (below) also highlights which set of actions of the Global Framework Plan of Action are helpful for attaining a specific target.

Moreover, to the advantage of the new Framework Plan, actions are detailed in four interconnected but separate areas such as legislation, enforcement, education and technology for each of the four pillars. These areas are separate, since typically other national actors are in charge of action in these areas. At the same time, they are interconnected, as action in one area can be impossible or do not lead to an expected result if no action in another area under the same pillar was implemented.

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\(^4\) These targets can be consulted at: http://www.who.int/violence_injury_prevention/road_traffic/Report-of-the-meeting-of-member-states-Annex.pdf?ua=1
Example 1: Conducting a roadside check would not be effective if traffic rules were not established and put in force to be checked against and when there was no effective penalty system in place that could be used against the offenders.

Example 2: Putting in force requirements for periodic vehicle inspection would not be effective if specific actors (vehicle inspection centres) would not be established to conduct such inspections.

The classification of action in the new Framework Plan is thus meant to show a full spectrum of interconnected actions that should be undertaken by different actors in a coordinated way to improve safety of users, vehicles, roads and make the post-crash response more effective. This is also meant to encourage a joint effective work of various actors at a country level.

In addition, the new Framework Plan details the availability (per pillar) of specific United Nations conventions and resolutions forming the international regulatory framework serving as basis to the establishment of national road safety systems.

The new Framework Plan can thus be seen as a desired development from the Global Plan for the Decade of Action, suggesting specific actions across pillars and areas, which by their inherent interconnected characteristics foster the establishment of sound national road safety systems and should deliver effective road safety outcomes.

V. Actions of Global Framework Plan of Action for Road Safety

Detailed actions across areas and pillars of the Global Framework Plan of Action for Road Safety are provided in this section. Ways for effective implementation of these actions are provided in chapter VI.

These actions can effectively be used by countries that meet basic initial conditions. Such require that an overall system of governance is in place shaped by administrative, civil and criminal legal and institutional frameworks that can be further enhanced to establish comprehensive and sustainable national road safety systems.

5.1. Road Safety management

5.1.1. Management action

This area comprises the following actions:

1) Set road safety targets (fatality reduction, accident reduction, serious injury reduction) linked to the implementation of National Action.

2) Ensure vertical and horizontal coordination between action taken by designated authorities across road safety pillars and areas.

3) Ensure coordination with other country priorities and policies especially with land use planning and mobility policies.

4) Review performance based on the monitoring of action and make adjustment to interim targets and to National Action.

This work can be done by a lead agency or a ministry designated to coordinate road safety. It can further include assistance in ensuring sufficient funding for ministries and related agencies implementing specific road safety actions.
The establishment of the National Action, and linking it with national time-bound targets, will allow countries to attain Target 1 of the road safety global voluntary performance targets: By 2020, all countries establish a comprehensive multisectoral national road safety action plan with time-bound targets.

5.1.2. Monitoring action

This area comprises the following actions:

1) Maintain common road safety database or integrate databases maintained by appropriate designated authorities for specific road safety action. A common database may be maintained by a lead agency, if such was established.

2) Calculate and share indicators linked to actions of National Action, among them, such indicators as:
   - Annual number of road side checks and other checks
   - Annual number of citation for offending traffic rules (by infringement: speed, non-use of helmet, non-use of child restraint, non-use of safety belt, excessive use of alcohol/psychoactive substances, use of mobile phone while driving, blocking public spaces, etc.)
   - Annual number of issued driving permits
   - Annual number of driver exams
   - Annual number of withdrawn driver permits (by infringement)
   - Number of registered vehicles
   - Annual number of periodic technical inspection
   - Annual number of withdrawn registration certificates
   - Proportion of vehicles in circulation meeting required technical standards
   - Proportion of new or imported (used) vehicles meeting required technical standards
   - Proportion of vehicles in circulation that have successfully passed periodical technical inspections
   - Annual number of licenses issued/withdrawn to/from inspection centers
   - Length of the roads by category
   - Annual change in the length of the road
   - Annual number of road audits and inspections
   - Proportions of road kilometers audited or inspected
   - Length or proportion of roads that passed inspection (meet the required technical standard)
   - Annual number of licenses issued/withdrawn to/from audit/inspection bodies
   - Annual changes to budgets of road safety authorities
   - Annual average post-crash response time
   - Proportion of MDCI to all crash investigations
   - Annual number of outreach and awareness raising activities (by topic)
- Number of training activities for vehicle inspectors, road auditors and inspectors, professional emergency services

5.2. Safe User

5.2.1. Legislation

This area focused on the traffic rules, drivers of vehicles (including cyclists) and pedestrians should comprise the following action:

1) Put in place a comprehensive system of signs, signals and instructions to be observed on the road
2) Adopt strict rules for drivers and specific rules for professional drivers
3) Adopt adequate rules for pedestrians and cyclists and their interaction with drivers and behavior of drivers towards pedestrians and cyclists with appropriate liability for drivers
4) Put in place effective rules on position on carriageway, maneuvering, overtaking, passing of traffic, change of directions, slowing down
5) Adopt rules for intersections, level-crossings and giving way
6) Regulate reasonable speed and distance management
7) Strictly regulate driving under fatigue and the influence of substances that negatively affect the driving capacity
8) Put in place rules on the compulsory use of safety equipment (safety belts, child restraint systems, helmets)
9) Regulate the use of lamps
10) Regulate strictly loading of vehicles and carriage of passengers and put in place specific regulations for cargo securing for road transport and for carriage of passengers by buses and coaches.
11) Put in place adequate rules on behavior in case of accident
12) Adequately regulate distraction during driving and walking due to use of infotainment systems, portable electronic devices or mobile phones
13) Put in place regulations relating to public transport vehicles and rail-born vehicles
14) Regulate adequately standing and parking on road, opening of doors

15) Put in place special regulations for motorways and/or tunnels

16) Put in place special rules applicable to cyclists, moped and motorcycle drivers

17) Designate authorities responsible for implementation including those for enforcement of the rules and regulations put in force as well as for their further development, as necessary

18) Introduce effective penalties scheme for offending rules of road

19) Adopt compulsory liability insurance system for driving motor vehicles

20) Adopt specific rules for carrying dangerous goods by road and define such goods, their classification, labeling or packaging

21) Assess effectiveness and completeness of legislation (completeness of regulatory framework benchmarked against international regulatory framework)

Responsibility for implementation: Relevant national authorities for roads and road traffic such as Ministry of Transport and/or Ministry of Interior.

International assistance: Regional commissions as relevant.

Implementation of the actions provided above with the specific focus on actions such as 6, 7, 8 and 12 as well as combined with the actions provided under the enforcement, education and technology sections below would allow to attain Targets 6, 7, 9, 10 and 11 of the road safety global voluntary performance targets: (i) By 2030, halve the proportion of vehicles travelling over the posted speed limit and achieve a reduction in speed-related injuries and fatalities (especially actions 6 and 18); (ii) By 2030, increase the proportion of motorcycle riders correctly using standard helmets to close to 100% (especially actions 8 and 18); (iii) By 2030, increase the proportion of motor vehicle occupants using safety belts or standard child restraint systems to close to 100% (especially actions 8 and 18); (iv) By 2030, halve 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 (especially actions 7 and 18); (v) By 2030, all countries have national laws to restrict or prohibit the use of mobile phones while driving (especially actions 12 and 18); and (vi) By 2030, all countries to enact regulation for driving time and rest periods for professional drivers, and/or accede to international/regional regulation in this area (especially actions 7 and 18).

5 The lists of institutions (both at national and international levels) are provided only for indicative purpose.
5.2.2. Enforcement

This area focused on ensuring lawful behavior on roads through police and inspectors should comprise the following action:

1) Carry out roadside checks on compliance of traffic rules for drivers, pedestrians and cyclists as well as overloading of cargoes and passengers (police and other inspectors, use of enforcement technology e.g. speed cameras, other monitoring high-resolution cameras for detecting offences, breath analysers)

2) Carry out other checks (e.g. inspection at enterprises, – driving-rest times of professional drivers)

3) Prevent public spaces – sidewalks and cycle lanes from being appropriated from vehicles or commercial activities

4) License and inspect driver training organizations and supervise examinations

5) Apply penalties effectively and use anti-corruption mechanism

6) Enable multiple offence enforcement mechanism (e.g. speed – technical inspection – liability insurance) by interlinking and providing access of enforcement authorities to databases on vehicle technical inspection, vehicle registration, driver permit.

7) Support development of and implement more sophisticated technology for identifying and monitoring offences by users

8) Assess effectiveness of user enforcement activities by use of appropriate indicators

9) Ensure sufficient budget for enforcement activities

Responsibility for implementation: Mainly traffic police, Ministry of Interior and their bodies such as relevant inspection agencies.

International assistance: Regional commissions as relevant, UNDP, UN-Habitat (for cities), relevant non-governmental organizations and academia in coordination with international regulatory support.
5.2.3. Education

This area focused on awareness raising, training and examination for users should comprise the following action:

1) Start road safety behavior awareness raising and teach minimum basic road safety rules already to children (as of 5 years old) with focus on safe street crossing and navigation on sidewalks

2) Train bicycle riders at earliest stage (children as of 10-12 years old)

3) Train drivers according to the categories applied for, and verify their driving skills and behavior through examination before issuing driving permit

4) Provide special training for professional drivers and test their (driving) skills and behavior before issuing Certificate of Professional Competence in addition to driving permit

5) Provide special training and certification for driving instructors

6) Provide periodic re-training for professional drivers, in particular drivers driving vehicles carrying dangerous goods

7) Introduce changes to training and examination following technology progress and changes to driving

8) Enhance awareness on rules of the road beyond drivers by road safety programmes at schools and by targeted awareness raising campaigns

9) Train enforcement authorities – roadside check authorities – to educate on the rules of the road while enforcing them

10) Assess effectiveness of education activities by use of appropriate indicators

11) Ensure adequate budget for education and training

Responsibility for implementation: Relevant national ministries such as Ministry of Education, Ministry of Interior, Ministry of Transport, Ministry of Information and their relevant agencies.

International assistance: UNESCO, UNICEF for children, UN-Habitat for cities, relevant non-governmental organizations and academia in coordination with international regulatory support.

5.2.4. Technology
This area focused on supportive technology and equipment and rules reminders should comprise the following action:

1) Support developers to bring to market technologies that would keep road users attentive in following road traffic rules (alcohol ignition interlock, safety-belt reminders, speed reminder/intelligent speed limiters, approach to level-crossing reminder, safety reminder on mobile phone while driving or walking).

2) Support developers to bring to market equipment and technologies for vehicles and for infrastructure that would assist drivers and other road users in dangerous situations and in avoiding or mitigating road crashes (pedestrian/cyclist detection, emergency steering functions, automated emergency braking systems, protective clothing for motorcycle riders, intelligent traffic light management for e.g. pedestrian crossing, bicycle lanes, etc.).

Responsibility for implementation: Relevant national ministries such as Ministry of Transport, Ministry of Interior, Ministry of Information and Communication, Ministry of Industry, Ministry of Economy and Trade and their relevant agencies, in particular in charge of norms and standards.

International assistance: Regional commissions, UNDP, UN-Habitat for cities, UNICEF for children, relevant non-governmental organizations and academia, private sector (equipment and vehicle manufacturers) in coordination with international regulatory support.
5.2.5. International Regulatory Support

The UN road safety conventions, especially those listed below, serve as the benchmark for developing national legislation for addressing safety of users:

- 1968 Convention on Road Traffic
- 1968 Convention on Road Signs and Signals
- 1957 European Agreement concerning the International Carriage of Dangerous Goods by Road and on-going amendment as a global agreement
- 1970 European Agreement concerning the Work of Crews of Vehicles engaged in International Road Transport and future amendment as a global agreement or further development as a global recommendation for all drivers of motor vehicles

The following resolutions are helpful to support national action for enhancing safety of users:

- UN Consolidated Resolution on Road Traffic
- UN Consolidated Resolution on Road Signs and Signals
- UN Resolution on the deployment of highly and fully automated vehicles in road traffic

The Conventions and resolutions are managed by Global Forum for Road Traffic Safety (WP.1), Working Party on Road Transport (SC.1, work of crews) and Working Party on the Transport of Dangerous Goods (WP.15) serviced by UNECE.

More accession to the legal instruments and participation in the activities of the intergovernmental platforms are needed to elaborate the best practices and new developments for incorporation into the national road safety systems to keep the systems updated.

Accession to the one of the Conventions would allow countries to attain Target 2 of the road safety global voluntary performance targets: By 2030, all countries accede to one or more of the core road safety-related UN legal instruments.
5.3. Safe vehicle

5.3.1. Legislation

This area focused on rules and standards for admission of vehicles to traffic should comprise the following action:

1) Adopt rules for registration of vehicles that include strict vehicle inspection schemes
2) Adopt rules on vehicle’s identification marks
3) Establish vehicle’s minimum safety requirements for admission to traffic, both for new and/or imported second hand vehicles (braking, electronic stability control, steering, tyres, lighting and lighting devices, safety belts, child restraint anchorages (ISOfix), crash protection against front-, lateral- and pole-side- impact, pedestrian protection, child restraint systems and helmets, front and rear underrun protection, safety glazing)\(^6\)
4) Put in place a regime for vehicle certification for both new and/or imported second hand vehicles with requirements for the certification processes, designation of technical services and/or inspectors, their facilities and knowledge, quality control and conformity of production and/or market surveillance.
5) Put in place a regime for periodic technical inspection of vehicles in use (registered) with requirements of scope, frequency of inspections, inspection items, test methods

\(6\) Minimum set of UN Vehicle Regulations to enhance road safety:
UN Regulation No 13 and 13H on brakes and UN Regulation No. 78 or UN GTR No.3 on motorcycle braking
UN Regulation No. 140 on electronic stability control or UN GTR No. 8.
UN Regulation No. 79 on steering
UN Regulations Nos. 30, 54 and 75 on tyres
UN Regulations Nos. 48, 53 and 74 on lighting installation
UN Regulation No. 16 on Safety-belts and UN Regulation No. 14 on Safety-belts anchorages
UN Regulation No. 145 on ISOfix anchorages
UN Regulations Nos. 94 and 95 front and side impact protection and UN Regulation No. 135 or UNGTR No. 14 on pole side impact
UN Regulation No. 127 or UN GTR No. 9 on Pedestrian safety
UN Regulations Nos. 44 or 129 on Child restraint systems and UN Regulation No. 22 on helmets
UN Regulations Nos. 58 and 93 on rear- and front underrun protection
UN Regulation No. 43 or UN GTR No. 6 on safety glazing
assessment of deficiencies, test equipment and facilities, skills and training of inspectors, and supervision of test centers.  

6) Designate authorities responsible for implementation including enforcement of the rules and regulations put in force as well as for their further development, as necessary.

7) Introduce effective penalties scheme for incompliance with vehicle requirements

8) Introduce vehicle requirements and certification for carriage of dangerous goods

9) Assess effectiveness and completeness of legislation (completeness of regulatory framework benchmarked against international regulatory framework)

Responsibility for implementation: Relevant national ministries such as Ministry of Industry, Ministry of Transport and/or Ministry of Interior.

International assistance: Regional Commissions, UNEP for used vehicles, academia in coordination with the global regulatory support.

Implementation of the actions provided above and combined with the actions provided under the enforcement, education and technology sections below would allow to attain Target 5 of the road safety global voluntary performance targets: By 2030, 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.

5.3.2. Enforcement

This area focused on certification and inspections by qualified inspectors should comprise the following action:

1) Authorize inspection centers, which may include privately operated workshops, for technical inspections and supervise and audit inspection centers

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7 UN Rule No. 1 on inspection of environmental related vehicle elements, UN Rule No. 2 on roadworthiness inspection, Resolution R.E.6 on test-equipment, skills and training of inspectors, supervision
2) Carry out road side technical checks including load securing (police and technical inspectors, enforcement technology e.g. mobile testing stations, portable inspection tools)

3) Establish and interlink databases for vehicle registration, periodic technical inspection and technical roadside inspections

4) Undertake import/export control on new and used vehicles

5) Apply effectively penalties for use of vehicles with expired certificates

6) Apply effectively penalties to inspection centers and use anti-corruption mechanism

7) Assess effectiveness of vehicle enforcement activities by use of appropriate indicators

8) Ensure sufficient budget for inspection, supervision and audit

Responsibility for implementation: Relevant national ministries such as Customs, Ministry of Transport, Ministry of Interior and their bodies such as relevant inspection agencies and the police.

International assistance: Regional Commissions, UNEP for used vehicles and UNDP, relevant non-governmental organizations and academia in coordination with the global regulatory support.

5.3.3. Education

This area focused on awareness-raising for users and training for inspectors should comprise the following action:

1) Conduct campaigns to raise general awareness of safety benefits from safety systems of vehicles and proper equipment, importance of continuous vehicle-maintenance and proper use of safety related systems and equipment.

2) Carry out targeted campaigns for specific groups of users (e.g. equipment for safe transport of children in vehicles, motorcycle helmets)

3) Train, re-train and test inspectors to carry out high quality inspection and technical check

4) Assess effectiveness of education activities by use of appropriate indicators
5) Ensure adequate budget for education and training

Responsibility for implementation: Relevant national ministries such as Ministry of Industry, Ministry of Transport and/or Ministry of Interior and their relevant agencies.

International assistance: Regional Commissions as relevant, UNDP, UNICEF for children and UN-Habitat for cities, relevant non-governmental organizations and academia, private sector (equipment and vehicle manufacturers).

5.3.4. Technology

This area focused on supportive technology and equipment and compliance reminders should comprise the following action:

1) Support developers to bring to market automated technologies reminding vehicle owners to renew technical inspection or registration

2) Support developers to bring to market technologies making vehicles safer and provide higher protection for other road users especially vulnerable ones (blind spot monitoring and detection, rear crossing detection, active bonnets (outside airbags), night vision systems, door opening monitoring, intelligent cruise control, pedestrian/cyclist detection, emergency steering functions, automated emergency braking systems, etc.) as well as automated solutions.

Responsibility for implementation: Relevant national ministries such as Ministry of Industry, Ministry of Information and Communication, Ministry of Transport, Ministry of Interior, Ministry of Economy and Trade and their relevant agencies.

International assistance: Regional Commissions, UNDP, UNEP for used vehicles, relevant non-governmental organizations and academia, private sector (equipment and vehicle manufacturers) in coordination with the global regulatory support.
5.3.5. International Regulatory Support

The UN transport conventions, especially those listed below, serve as the benchmark for developing national legislation for ensuring safe vehicle:

- 1968 Convention on Road Traffic - provisions regarding vehicle admission to traffic
- 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 (Revision 3)
- 1997 Agreement concerning the Adoption of Uniform Conditions for Periodical Technical Inspections of Wheeled Vehicles and the Reciprocal Recognition of Such Inspections
- 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

The following resolutions, standards or programmes are helpful to support national action for ensuring safe vehicle:

- UN Consolidated Resolutions on the Construction of Vehicles,
- UN Consolidated Resolution on the Common Specification of Light Source Categories,
- UN Consolidated Resolution on Test-equipment, Skills and Training of Inspectors, Supervision, and
- UN Consolidated Resolution on Road Traffic
- Mutual Resolution No. 1 of the 1958 and the 1998 Agreements concerning the Description and Performance of Test Tools and Devices necessary for the Assessment of Compliance of Wheeled Vehicles, Equipment and Parts according to the Technical Prescriptions specified in UN Regulations and UN Global Technical Regulations
- Mutual Resolution No. 2 of the 1958 and the 1998 Agreements Containing Vehicle Propulsion System Definition
- Special Resolution No. 1 of the 1998 Agreement concerning the Common Definitions of Vehicle Categories, Masses and Dimensions
- Global New Car Assessment Programme

More accession to the legal instruments and participation in the activities of the intergovernmental platforms are needed to elaborate the best practices and new developments for incorporation into the national road safety systems to keep the systems updated.

Accession to the one of the Conventions would allow countries to attain Target 2 of the road safety global voluntary performance targets: By 2030, all countries accede to one or more of the core road safety-related UN legal instruments.

5.4. **Safe road**

5.4.1. **Legislation**

This area focused on standards for road design, construction, maintenance and signage should comprise the following action:

1) Put in place road classification including for urban streets that meet the safety needs of all road users
2) Put in place adequate standards for geometric and design characteristics per classified road (No. of lanes, separation of lanes, width of lanes, curve radii, horizontal and vertical alignment, cross-sections, overhead clearance, intersections, tunnels, level-crossings, roundabouts, roadsides, etc.)
3) Adopt general prescriptions and related standards for infrastructure for non-motorized traffic, crossings and separation with motorized traffic of bicycle lanes and pedestrian paths and sidewalks
4) Adopt internationally harmonized signs and signals
5) Establish national standards on safety facilities (including sufficient numbers of rest areas and adequate emergency lanes) and devices (such as traffic separation device and fence)
6) Adopt standards to remove level crossings in areas of high traffic flows and do not place bus stops in proximities of level crossings
7) Regulate shared traffic zones and non-motorized traffic zones as well as special school zones
8) Regulate road equipment per classified road (markings, signage, calming equipment)
9) Put into place regulations to ensure that infrastructure plans and land use planning prioritize safety
10) Introduce standards for road maintenance
11) Introduce standards for road work zones
12) Designate authorities responsible for implementation including inspection/auditing and enforcement of the existing standards as well as for their further development, as necessary
13) Assess effectiveness and completeness of standards (completeness of standards benchmarked against international regulatory framework)

Responsibility for implementation: Relevant national ministries such as Ministry of Transport, Ministry of Interior and Ministries dealing with infrastructure and/or spatial planning.

International assistance: Regional Commissions, multilateral development banks, relevant UN agencies, relevant non-governmental organizations and academia.

Implementation of the actions provided above and combined with the actions provided under the enforcement, education and technology sections below would allow to attain Targets 3 and 4 of the road safety global voluntary performance targets: (i) By 2030, all new roads achieve technical standards for all road users that take into account road safety, or meet a three star rating or better, (ii) By 2030, 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.

5.4.2. Enforcement

This area focused on audit, assessment and inspection by qualified teams should comprise the following action:

1) License and accredit road assessment, inspection and audit organizations
2) Conduct traffic safety audits of new infrastructure plans
3) Conduct new road safety design assessment and audit before construction work starts
4) Conduct new road safety audit before opening it to traffic
5) Carry out periodic safety inspection of roads in operation, including risk mapping
6) Introduce safety measures if safety conditions of a road deteriorate (e.g. decrease travel speed, close road as an extreme case)
7) Assess effectiveness of road enforcement activities by use of appropriate indicators
8) Ensure sufficient budget for road assessment, inspection and audit

Responsibility for implementation: Relevant national ministries such as Ministry of Transport, Ministry of Interior, Ministries dealing with infrastructure and/or spatial planning and their relevant inspection/licensing agencies.

International assistance: Regional Commissions, multilateral development banks, relevant UN agencies, relevant non-governmental organizations and academia.

5.4.3. Education

This area focused on awareness-raising for road managers, users and for inspectors should comprise the following action:

1) Carry out campaigns to build public support to construction and maintenance of safe roads as well as their proper usage
2) Provide engaging public outreach experiences through temporary street and intersection redesigns and develop community awareness of the benefits of road safety interventions
3) Train road designers, construction engineers, inspection and audit organizations to perform high-quality work, when possible by developing local road safety assessment, inspection or audit programmes
4) Assess effectiveness of education activities by use of appropriate indicators
5) Ensure adequate budget for awareness raising and training
Responsibility for implementation: Relevant national ministries such as Ministry of Transport and/or Ministries dealing with infrastructure and/or spatial planning, and their relevant agencies.

International assistance: Regional Commissions, multilateral development banks, relevant UN agencies, relevant non-governmental organizations and academia.

5.4.4. Technology

This area focused on forgiving and self-explaining road design and intelligent road and traffic management systems should comprise the following action:

1) Use equipment, materials and technologies for design and construction of forgiving, self-explaining roads including elements such as lane separation devices, emergency lanes, positioning, school zones, design and protection of traffic sign stayers

2) Use equipment, materials and technologies for design and construction of urban streets including elements such as separation of pedestrian areas, speed humps, traffic calming equipment, cycling lanes, parking areas, school zones, lanes for individual transport and lanes for public transport, information systems for road users (waiting times, delays in traffic, alternative routing)

3) Use equipment and technologies to measure, benchmark and report on safety performance of roads

4) Use equipment and technology and support development of new technology to measure objectively the safe performance of road design

5) Support development of intelligent cost-effective road system (VMS, systems to increase user attention, infrastructure to vehicle communication systems)

6) Introduce intelligent traffic management system based on sensor data and traffic forecasts with intelligent speed managements, re-routing, etc.

Responsibility for implementation: Relevant national ministries such as Ministry of Transport and/or Ministries dealing with infrastructure, spatial planning, digitalization and its relevant agencies.
International assistance: Regional Commissions and UN agencies as relevant, multilateral development banks, relevant non-governmental organizations and academia, private sector (equipment and vehicle manufacturers).

5.4.5. International Regulatory Support

The UN transport conventions and international standards, especially those listed below, serve as the benchmark for developing national legislation for developing road standards:

- 1968 Convention on Road Signs and Signals
- 1975 European Agreement on Main International Traffic Arteries
- 2001 Agreement on International Roads in the Arab Mashreq
- 2004 Intergovernmental Agreement on the Asian Highway Network
- Intergovernmental Agreement on the Trans-Africa Highways Network

The following resolutions, recommendations and standards are helpful to support national action for safe roads:

- UN Consolidated Resolutions on Road Traffic
- UN Consolidated Resolutions on Road Signs and Signals
- International Road Assessment Programme, with standards for road assessment and standards for risk mapping
- Technical recommendations from global organizations like PIARC
- ISO road construction standards

The legal instruments and resolutions on road signs, signals and markings are managed by the Global Forum for Road Traffic Safety (WP.1). The regional agreements on roads are managed by the Working Party on Road Transport (SC.1) serviced by UNECE. Committee on Transport and Logistics is serviced by ESCWA, Working Group on Asian Highway is serviced by ESCAP.
More accession to the legal instruments and participation in the activities of the intergovernmental platforms are needed to elaborate the best practices and new developments for incorporation into the national road safety systems to keep the systems updated.

Accession to the Conventions on Road Signs and Signals would allow countries to attain Target 2 of the road safety global voluntary performance targets: By 2030, all countries accede to one or more of the core road safety-related UN legal instruments.

5.5. Effective post-crash response

5.5.1. Legislation

This area focused on standards for data collection, post-crash response and investigation should comprise the following action:

1) Introduce legal requirement for anyone to perform first-aid activities within his/her capacity
2) Introduce standards for post-crash professional emergency response
3) Introduce framework for rehabilitation programmes
4) Establish a link between liability insurance and financing of care for crash victims and rehabilitation programmes
5) Enable multi-disciplinary crash rescue operation and investigation
6) Introduce a clear framework for crash investigation and data collection
7) Designate authorities responsible for implementation including enforcement of the existing standards as well as for their further development, as necessary
8) Assess effectiveness and completeness of standards (completeness of standards benchmarked against international regulatory framework)

Responsibility for implementation: Relevant national ministries such as Ministry of Health, Ministry of Transport and Ministry of Interior.

International assistance: WHO (health related actions, such as rescue system and health care) UNECE (standard post-crash procedures to avoid further crash and facilitate rescue, liability and crash investigation).
Implementation of the actions 1 and 2 combined with actions 1 and 3 of the enforcement and education sections below would allow attaining Target 12 of the road safety global voluntary performance targets: By 2030, 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.

5.5.2. Enforcement

This area focused on oversight of resource services and investigation of crashes should comprise the following action:

1) License (if private run) or review application of standards for emergency response (if state run) to improve the response, maintain compliance and avoid complacency
2) Oversee rehabilitation programmes and trauma centers
3) Ensure sufficient budget for emergency response
4) Carry out multidisciplinary crash rescue and investigations
5) Produce, analyze and publish data and indicators on accidents and their consequences
   - Number of road traffic fatalities and serious injuries and their number per type of users (drivers, vehicle occupants, children occupants, PTW users, pedestrians)
   - Number of road traffic fatalities and serious injuries attributable to or combination of factors such as:
     - speed, distraction, driving under influence, non-use of safety-belt, of child restraint, of helmet
     - vehicle defects
     - infrastructure defect
   - Effectiveness of response
6) Assess through multidisciplinary crash investigations (MDCIs) gaps in national road safety system and make recommendations for improvements, especially in areas of legislation and enforcement
7) Assess effectiveness of post-crash enforcement activities by use of appropriate indicators

Responsibility for implementation: Relevant national ministries such as Ministry of Health, Transport and/or Ministry of Interior and their relevant agencies.

International assistance: WHO (health related actions and data collection), UNECE (post-crash procedures and investigation), other relevant UN agencies (functioning of response system), relevant non-governmental organizations and academia.

5.5.3. Education

This area focused on first aid training for users, training for rescue forces and training for investigators should comprise the following action:

1) Carry out campaigns to build public understanding to call professional emergency services to the crash scene and to provide first aid by everyone within his/her capacity
2) Provide general training for users to be capable to provide first aid and take care of victims until professional emergency services arrive
3) Provide regular training and certification for professional emergency services
4) Provide training and certification for rehabilitation organizations and trauma centers
5) Provide training and certification for investigators in MDCIs
6) Assess effectiveness of education activities by use of appropriate indicators
7) Ensure adequate budget for awareness raising and training

Responsibility for implementation: Relevant national ministries such as Ministry of Health, Transport and/or Ministry of Interior and their relevant agencies.

International assistance: WHO (health related actions), UNECE (crash investigation), UNESCO (general school education), UNICEF (children), relevant non-governmental organizations and academia.
5.5.4 Technology

This area focused on supportive technology and equipment should comprise the following action:

1) Support development of intelligent systems supporting the work of emergency response centers, rehabilitation centers and facilitating victims support
2) Support development of technology facilitating MDCIs (crash investigation specific geo-information systems, crash simulation software, vehicle crash performance databases)

Responsibility for implementation: Relevant national ministries such as Ministry of Health, Transport and/or Ministry of Interior and their relevant agencies.

International assistance: WHO (health related actions), UNECE (crash investigation), other relevant UN agencies, relevant non-governmental organizations and academia, private sector (equipment and vehicle manufacturers).

5.5.5 International Regulatory Support
The following international standards and resolutions are helpful to support national action for enhancing effective post-crash response:

- UN Consolidated Resolution on Road Traffic with a set of good practices on effective post-crash response, on the conduct of MDCIs and on setting up liability regime

The resolution is managed by the Global Forum for Road Traffic Safety (WP.1) serviced by UNECE. Further development of the resolution is needed within the framework of this forum.

More participation in the activities of the Global Forum for Road Traffic Safety (WP.1) is needed to elaborate the best practices and new developments for incorporation into the national road safety systems to keep the systems updated.

VI. Application of the Global Framework Plan of Action for Road Safety

The Global Framework Plan of Action for Road Safety is designed to serve as benchmark for development of sound national road safety systems. The UNRSTF may use this Framework Plan of Action to prioritize and coordinate its financial support to countries and promote coordination of financial support with other funds or programmes.

The countries may select the missing or weak elements of their national road safety systems from the existing national action plans or national road safety performance reviews checked against the Framework Plan of Action for funding support from the UNRSTF.

Should such a plan or review be not available, through making an assessment of existing national situation vis-à-vis the Global Framework Plan of Action, a country interested to establish a comprehensive and sound national road safety system should be in position, if necessary with international assistance, to identify shortcomings and required actions for funding support from the UNRSTF and from other resources.

A country can prioritize actions for implementation by defining adequate implementation timeframes and through it establish its National Action. When doing so, the economic situation, urgency, other existing priorities and plans may be taken into account (Figure 7).

This work can be coordinated at the government level and depending on a country governmental structure may be led by a designated lead agency.
For action at city level, especially for mega cities, their municipalities may establish their own municipal road safety system following the same approach as for the national system. These municipal systems can be coordinated with the national system.

The implementation process should be carefully monitored either by authorities responsible for specific tasks or by the lead agency. Relevant data should be collected and performance indicators measured. The data and indicators should be closely linked to actions undertaken. Assessment should be done on how the implemented actions impact the reduction of road traffic fatalities or serious injuries.

The UNRSTF financial support will focus on technical assistance in formulating policies and plans and establishing legislation. It will support technical assistance in making institutional adjustments to establish or improve national road safety systems. It will leverage and coordinate resources for institutional building and infrastructural developments of the national road safety systems.

Learning from the experience of the implementation, the Global Framework Plan of Action for Road Safety will be updated periodically by the UNRSTF Advisory Board. It can be also updated based on the lessons learned from the implementation and the 2011-2020 Decade of Action for Road Safety.

The UN Secretary-General’s Special Envoy for Road Safety may promote a global partnership to support the implementation of the Global Framework Plan of Action for Road Safety, advocate with governments for establishing, improving and/or sustaining the national road safety systems, and advocate the accession to, and more effective implementation of the UN road safety legal instruments in line with his Terms of Reference.
Figure 7. Application of the Global Framework Plan of Action for Road Safety
VII. International support to Global Framework Plan of Action for Road Safety

7.1. International regulatory support

UNECE administers 58 United Nations legal instruments on transport, among them the conventions providing international regulatory framework on road safety. UNECE works with and for the UN member States to further develop these conventions taking into account the changing conditions such as technology progress or societal changes.

Due to its role, UNECE has been well positioned to lead the action on a legal support for UN member States helping them to create domestic legislation building upon the provisions of the United Nations legal instruments on road safety.

To this end, UNECE, in cooperation with other Regional Commissions as relevant, should be working with all UN member States to facilitate their accession to the conventions, remove geographical or procedural barriers where they exist, facilitate full participation in the administrative bodies working on further development of the conventions, and most of all assist the transposition and implementation of the conventions’ provisions.

The 2030 Strategy for the Inland Transport Committee can help ensure that UNECE is in position to deliver the international legal support.

Regional Commissions have developed regional agreements on road infrastructure with standards for classification, design and construction. International non-governmental organization, such as PIARC, has prepared technical recommendations on safety of road infrastructure. They can also provide regulatory support for the pillar of safe roads.

7.2. International technical and financial assistance

All international assistance to member States should ideally target to improve, complete and sustain the national road safety systems and be coordinated based on the Global Framework Plan of Action for Road Safety. In this way the mistakes from the past should not be repeated, i.e. duplicated and fragmented efforts should be replaced by complementary activities provided through international assistance.

UNECE should lead the action on providing technical support in the area of legislation to member States engaging in this work its sister regional commissions.

UNESCO may wish to lead technical support in the area of education.

The World Bank as well as other multilateral development banks may wish to focus on providing help in the relevant areas for the pillar of safe roads.

WHO should specifically support the relevant areas for the pillar of effective post-crash response and lead global data collection and processing.

Other organizations, including non-governmental organizations and academia should provide technical support to the areas of enforcement, education, technology as per their proven expertise in these areas. For example, iRAP may support road assessment, and Global Alliance of NGOS for Road Safety may support post-crash care action, as well as promotional activities related to safety actions. The Global Road Safety Partnership and the Road Safety Collaboration may prioritize and provide action and collaboration for improving national road safety systems in line with the Global Framework Plan of Action for Road Safety.
A database of assistance activities should be possibly maintained under the Global Framework Plan of Action for Road Safety to manage the delivered international support in an effective way: ensure complementarity and prevent duplication.

Also a database with organisations and experts and information on their road safety expertise and contacts should be maintained under the Global Framework Plan of Action for Road Safety to facilitate direct access for countries to such expertise.