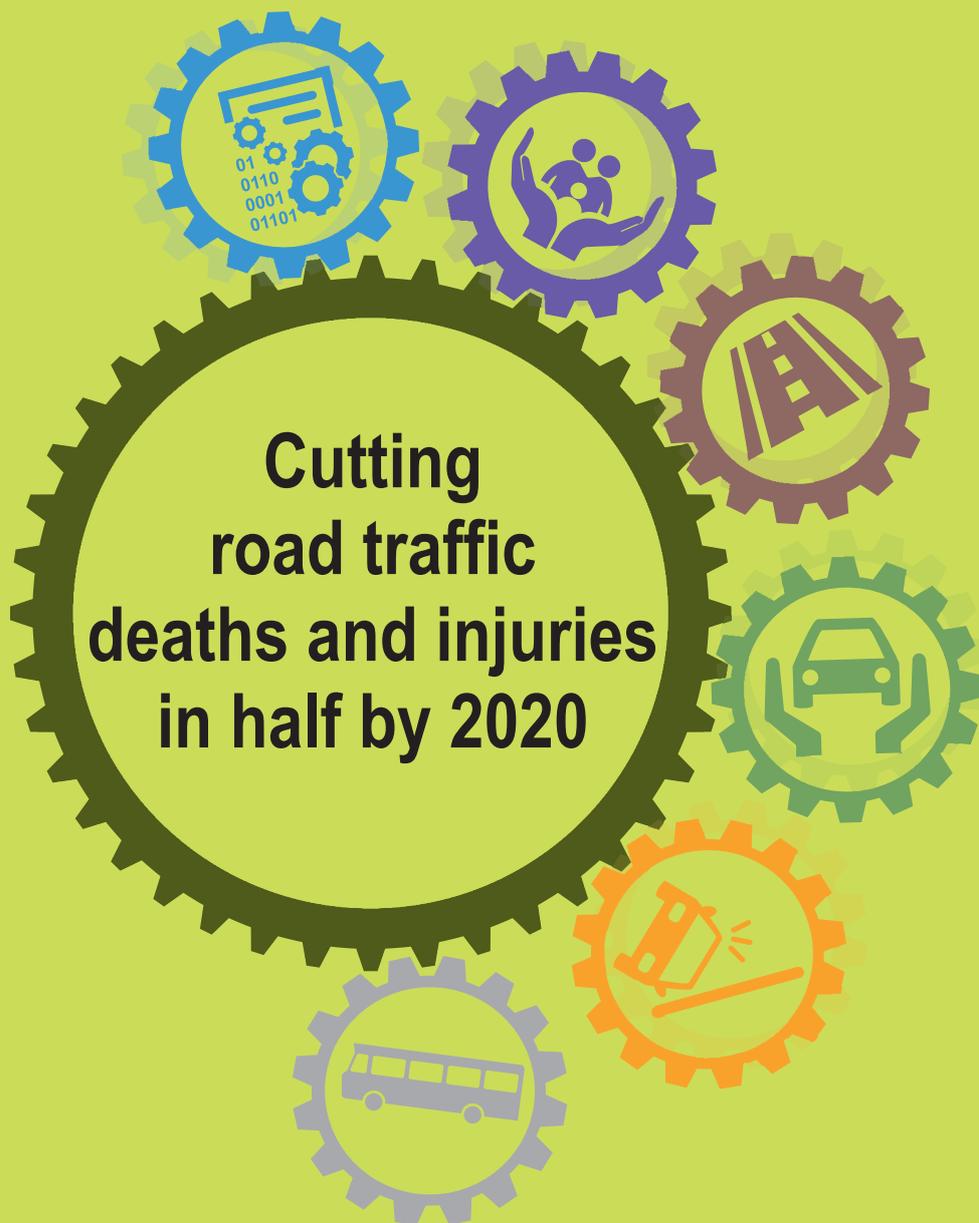


UNECE

Together with UNECE on the road to safety



UNITED NATIONS

UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE

Together with UNECE on the road to safety

**Cutting road traffic deaths and injuries
in half by 2020**



United Nations
New York and Geneva, 2015

NOTE

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UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE

The United Nations Economic Commission for Europe (UNECE) is one of the five United Nations regional commissions, administered by the Economic and Social Council (ECOSOC). It was established in 1947 with the mandate to help rebuild post-war Europe, develop economic activity and strengthen economic relations among European countries, and between Europe and the rest of the world. During the Cold War, UNECE served as a unique forum for economic dialogue and cooperation between East and West. Despite the complexity of this period, significant achievements were made, with consensus reached on numerous harmonization and standardization agreements.

In the post-Cold War era, UNECE acquired not only many new member States, but also new functions. Since the early 1990s the organization has focused on analyses of the transition process, using its harmonization experience to facilitate the integration of Central and Eastern European countries into the global markets.

UNECE is the forum where the countries of western, central and eastern Europe, central Asia and North America – 56 countries in all – come together to forge the tools of their economic cooperation. That cooperation concerns economics, statistics, the environment, transport, trade, sustainable energy, timber and habitat. The Commission offers a regional framework for the elaboration and harmonization of conventions, norms and standards. The Commission's experts provide technical assistance to the countries of south-east Europe and the Commonwealth of Independent States. This assistance takes the form of advisory services, training seminars and workshops where countries can share their experiences and best practices.

TRANSPORT IN UNECE

The UNECE Sustainable Transport Division is the secretariat of the Inland Transport Committee (ITC) and the ECOSOC Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals. The ITC and its 17 Working Parties, as well as the ECOSOC Committee and its sub-committees are intergovernmental decision-making bodies that work to improve the daily lives of people and businesses around the world, in measurable ways and with concrete actions, to enhance traffic safety, environmental performance, energy efficiency and the competitiveness of the transport sector.

The ECOSOC Committee was set up in 1953 by the Secretary-General of the United Nations at the request of the Economic and Social Council to elaborate recommendations on the transport of dangerous goods. Its mandate was extended to the global (multi-sectoral) harmonization of systems of classification and labelling of chemicals in 1999. It is composed of experts from countries which possess the relevant expertise and experience in the international trade and transport of dangerous goods and chemicals. Its membership is restricted in order to reflect a proper geographical balance between all regions of the world and to ensure adequate participation of developing countries. Although the Committee is a subsidiary body of ECOSOC, the Secretary-General decided in 1963 that the secretariat services would be provided by the UNECE Transport Division.

ITC is a unique intergovernmental forum that was set up in 1947 to support the reconstruction of transport connections in post-war Europe. Over the years, it has specialized in facilitating the harmonized and sustainable development of inland modes of transport. The main results of this persevering and ongoing work are reflected, among others, (i) in 58 United Nations conventions and many more technical regulations, which are updated on a regular basis and provide an international legal framework for the sustainable development of national and international road, rail, inland water and intermodal transport, including the transport of dangerous goods, as well as the construction and inspection of motor vehicles; (ii) in the Trans-European North-south Motorway, Trans-European Railway and the Euro-Asia Transport Links projects, that facilitate multi-country coordination of transport infrastructure investment programmes; (iii) in the TIR system (Transports Internationaux Routiers), which is a global customs transit facilitation solution; (iv) in the tool called For Future Inland Transport Systems (ForFITS), which can assist national and local governments to monitor carbon dioxide (CO₂) emissions coming from inland transport modes and to select and design climate change mitigation policies, based on their impact and adapted to local conditions; (v) in transport statistics – methods and data – that are internationally agreed on; (vi) in studies and reports that help transport policy development by addressing timely issues, based on cutting-edge research and analysis. ITC also devotes special attention to Intelligent Transport Services (ITS), sustainable urban mobility and city logistics, as well as to increasing the resilience of transport networks and services in response to climate change adaptation and security challenges.

The Sustainable Transport Division and the UNECE Environment Division also co-service the Transport, Health and Environment Pan-European Programme (THE PEP), in collaboration with the World Health Organization (WHO).

Finally, as of 2015, the UNECE Sustainable Transport Division is providing the secretariat services for the Secretary-General's Special Envoy for Road Safety, Mr. Jean Todt.

Inland Transport Committee (ITC) – Centre of United Nations Transport Conventions

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UNECE Sustainable Transport Division

**Our spotlight is
on road safety**



Focusing on international rules, regulations and procedures; analyzing situations; offering capacity-building and technical assistance, often out of sight – the Sustainable Transport Division of the United Nations Economic Commission for Europe is committed to improving road safety worldwide.

SUMMARY

The world has been paying serious attention to road safety since 2003, following a United Nations General Assembly Resolution on the rapid global increase in road traffic deaths, injuries and disabilities. With roughly 1.25 million people dying each year around the world as a result of traffic accidents, the United Nations Global Plan for the Decade of Action for Road Safety, introduced in 2011, has helped to garner further attention and spur action, particularly when the personal tragedy of every life lost reflects the enormous overall cost of road traffic accidents to society.

Doing its part to facilitate international cooperation in the area of road safety, the United Nations Economic Commission for Europe (UNECE) Inland Transport Committee (ITC) has been the “invisible hand” that has been busy applying many courses of action and tools to make roads safer. Its starting point are the international conventions and agreements it administers, which are at the core of all concerted efforts. In addition, UNECE has identified 11 goals derived from the five pillars of the Global Plan to form its strategic approach to road safety during the Decade. This report covers each goal in detail – from protecting vulnerable road users to raising awareness for road safety, from making vehicles safer to mitigating the impact of road crashes. It provides a comprehensive overview, including the status and key results of its goals, as well as descriptions of specific UNECE ITC initiatives and information on the challenges the overall road safety community faces.

One of the main conclusions of this report is that political will and the introduction and use of national strategies are likely to be the difference makers in helping to reach the main goal: halving the number of road traffic deaths and injuries by 2020.

The path to road safety is a personal, societal and organizational obligation. “Together with UNECE on the road to safety” clearly underlines this joint responsibility.



A recent Inland Transport Committee session

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PREFACE

Since 1947, the United Nations Economic Commission for Europe (UNECE) Inland Transport Committee (ITC) has been busy working as the “invisible hand”, applying myriad courses of action and tools to enhance road safety. In particular, it has supported the development of global and regional conventions, facilitated policy dialogue, conducted analytical work and provided capacity-building and technical assistance. While it may not be widely known, essentially all of the groundwork for road safety is founded on United Nations international conventions and agreements that seek to harmonize both basic and complex practices. These conventions are hosted by UNECE ITC.

Government officials and experts further amend these legal instruments to keep pace with social advances and technological change. The UNECE secretariat guides this process, supports member States through accession steps and helps them to develop and execute suitable strategies and plans. As a supporting “invisible hand”, the secretariat uses partnerships and attention to detail that may go largely unnoticed but reap visible benefits.

Through it all, road users must also carry responsibility. Even though road traffic systems help iron out safety concerns and reduce the risk of accidents, each person, whether a driver of a car, truck or bus, or a motorcyclist, cyclist or pedestrian, needs to understand the “rules of the road”. This is ever more important in the face of statistics that show more than two thirds of all accidents appear to be related to intentional or unintentional violation of rules by road users.

In short, the path to road safety is as much a personal obligation as it is a societal or organizational one. “Together with UNECE on the road to safety” is the way forward to achieve the goal of the United Nations Decade of Action for Road Safety 2011–2020 and the 2030 Agenda pertaining to road safety in the Sustainable Development Goals.



Can you spot a heart? Every minute, more than two people die in traffic accidents on the world's roads.



Can you spot a “number 1”? UNECE is the “number 1” source and guardian of United Nations global road safety solutions for roads, vehicles and user behaviour.

ROAD SAFETY IS IMPORTANT

Roads have been part of life for centuries. Who needs reminding that as societies have developed and interactions among them have become increasingly important, so too has the need for the free movement of people and goods, not just within borders but across them.

Ensuring safe, efficient, secure and sustainable transport is something many take for granted. Few stop to think why road networks function the way they do. But the growing numbers of vehicles, their drivers and passengers on the road, as well as burgeoning domestic and international trade and movement of cargo, underline the critical task of ensuring road safety around the world. Approximately 1 billion vehicles are on the world's roads, and that number is expected to double soon. About 1.25 million people die each year as a result of traffic accidents, and up to 50 million sustain non-fatal injuries. Moreover, road traffic accidents cost at least one per cent of the world's gross domestic product (GDP), or roughly US\$ 750 billion per year.

The personal tragedy of every life lost starkly reflects the enormous overall cost of road traffic accidents to society. UNECE works tirelessly to reduce the number of fatalities and injuries by ensuring that the existing, new and amended rules for traffic, road signs, road infrastructure and vehicles regulations are implemented and respected.

Just as buildings all have foundations and must follow basic principles of architecture and construction, whether for a skyscraper in Moscow or one in New York; and just as pastimes such as football require common playing surfaces, rules and measures of fair play that apply equally in local communities as in international tournaments, so does road safety depend on common regulations and their execution and enforcement. They ensure the transport of people and goods can occur in the most efficient and safest way possible.

The imperative is clear: to immediately decrease the number of fatalities



ROAD SAFETY GOVERNANCE

It all starts with conventions and international agreements

Few activities benefit from the guidance of an instructor’s words or helping hand, or the rules established by a society, as does driving a car or riding a two-wheeled vehicle. Road users often learn as young people what it means to be “behind the wheel”; they take courses or instruction from approved schools that know the rules, and get tested to acquire the right to drive. Finally, as part of a globalized world with increasingly fewer borders and ever-expanding tourism, they appreciate having similar rules and regulations in different countries, which makes the time spent on the road a great deal easier – and safer.



Underpinning this are comprehensive and properly managed United Nations conventions and agreements – perhaps “unseen” but providing the basis of safety measures for road users, their vehicles and, of course, the roads themselves.

Legal instruments provide a strong foundation

UNECE manages 58 transport-related legal instruments that are negotiated by governments and become binding for those that accede to them. All conventions are administered by the relevant Working Parties or Administrative Committees in charge of updating and amending them under the aegis of the UNECE ITC.

So that these conventions and agreements are actually used, the UNECE secretariat incorporates a governance structure that offers a multidimensional approach to assist with government accession and facilitate their implementation. It works in four core areas:

- **Regulatory:** developing and keeping United Nations transport conventions and agreements up to date;
- **Analytical:** creating knowledge related to the issues and topics relevant to these conventions and agreements;
- **Policy dialogue:** facilitating discussions on any topic related to sustainable transport;
- **Technical:** providing capacity-building and technical assistance in implementing conventions and agreements.



United Nations legal instruments are continuously promoted around the world.

What keys open the door to road safety?



The key United Nations road safety legal instruments are:

1949

Convention on Road Traffic (96 Contracting Parties [CPs])

1950

European Agreement supplementing the 1949 Convention on Road Traffic and the 1949 Protocol on Road Signs and Signals (14 CPs)

1968

Convention on Road Traffic (73 CPs)

1971

European Agreement supplementing the 1968 Convention on Road Traffic (35 CPs)

1949

Protocol on Road Signs and Signals (39 CPs)

1968

Convention on Road Signs and Signals (64 CPs)

1971

European Agreement supplementing the Convention on Road Signs and Signals (32 CPs)

1973

Protocol on Road Markings (27 CPs)

1975

European Agreement on Main International Traffic Arteries (AGR) (37 CPs)

1970

European Agreement concerning the Work of Crews of Vehicles Engaged in International Road Transport (AETR) (51 CPs)

1958

Agreement concerning the Adoption of Uniform Technical Prescriptions 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 Prescriptions (49 CPs)

1997

Agreement concerning the Adoption of Uniform Conditions for Periodical Technical Inspections of Wheeled Vehicles and the Reciprocal Recognition of Such Inspections (12 CPs)

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 (35 CPs)

1957

European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) (48 CPs)

From global foundation to local enforcement: Bringing agreements full circle

Imagine constructing a building; if the foundation isn't solid enough, it won't support the structure. And, it will be of no use to build anything – no matter how and where.

The same applies to road safety, with governance based on United Nations agreements. But that is only half the battle. From the international agreements, governments work out domestic legislation and programmes, which are implemented along with activities under a national and local legal framework. National enforcement then ensures that what is planned, designed and promised becomes reality. Statistical measures and monitoring can also review performance and provide lessons for incorporating into amendments to existing agreements and conventions, and even help to create new ones. Along these three paths are myriad tasks, programmes and activities that make road safety governance a truly holistic and societal approach.



From convention to execution: The path to better road safety

International measures that benefit any road traffic system should be implemented and enforced. Overall, they cover safer mobility of users and their behaviour, safer roads and safer vehicles.



Safer behaviour

No other source covers and mandates international rules on road traffic behaviour to ensure safe mobility as thoroughly as the 1968 Convention on Road Traffic. This global benchmark Convention is the “invisible” source of many visible end products or road-user behaviour. Examples of rules that originated from the 1968 Convention are:

Braking



Overtaking



Giving way



Behaviour at accident site



Level crossing



Driving permits

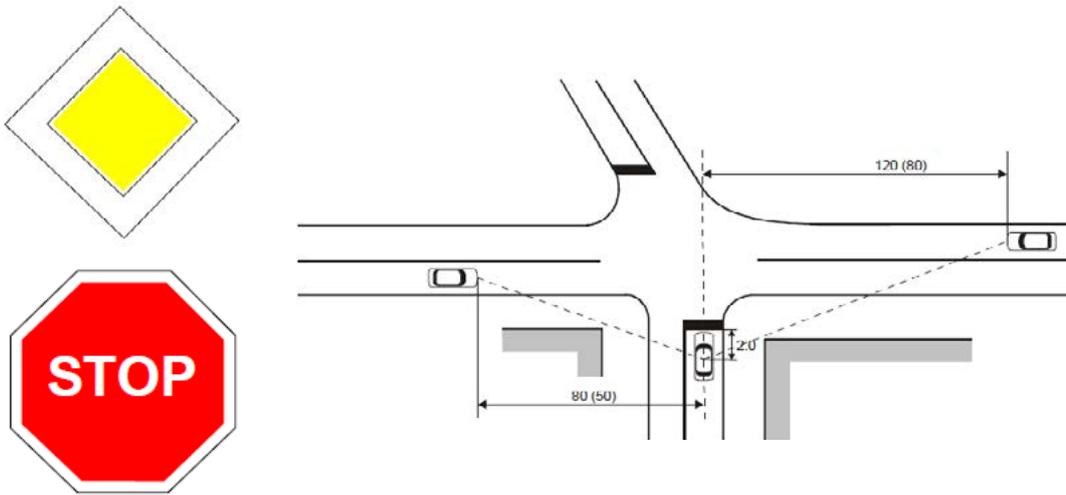


Safer roads



The AGR Agreement defines the E-road network

The development of infrastructure leading to an integrated transport system is a major priority for UNECE ITC. The foundations have been laid in three international agreements negotiated in UNECE and kept under constant review. One of them, the European Agreement on Main International Traffic Arteries (AGR), provides all UNECE member States with the international legal framework for the construction and development of a coherent international road network, with a view to developing international road transport. The AGR defines the E-road network, consisting of the arteries channelling major international road traffic flows in Europe, and the infrastructure parameters to which those arteries should conform. States that become Contracting Parties to the AGR Agreement commit themselves to its implementation, including the construction or upgrading of the E-roads in their territories within the framework of their national investment programmes. They are given complete latitude in the time frame for completing construction works.



Signs, symbols and markings are integral parts of all roads, and are regulated by the 1968 Convention on Road Signs and Signals, the European Agreement supplementing the Convention on Road Signs and Signals and the Protocol on Road Markings, Additional to the European Agreement

Safer vehicles

The Agreement concerning the Adoption of Uniform Technical Prescriptions 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 Prescriptions (1958 Agreement) provides governments with a legal framework and procedures for the adoption of uniform technical regulations applicable to road vehicles, their equipment and parts. Their adoption improves safety and environmental performance, facilitates international road traffic and removes technical barriers to international trade. The Agreement establishes the principle of the reciprocal recognition of the approvals. Over 135 regulations have been developed to date, including regulations for individual vehicle elements such as glass, tyres and seat belts, or for whole systems such as active safety systems.

In parallel, the 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 (1998 Agreement) supports governments in applying systems of vehicle self-certification by providing a set of Global Technical Regulations (GTRs) on safety and environmental performance. To date, 16 GTRs have been elaborated covering pedestrian safety, electronic stability control, emission test procedures and tyres.

In addition, the Agreement concerning the Adoption of Uniform Conditions for Periodical Technical Inspections of Wheeled Vehicles and the Reciprocal Recognition of Such Inspections (1997 Agreement) provides a legal framework to control the safety and environmental status of vehicles during their use.



THE UNITED NATIONS DECADE OF ACTION FOR ROAD SAFETY (2011–2020)



“Road crashes kill nearly 1.3 million people every year, and leave millions more injured or permanently disabled. Impaired driving, unsafe roads and other dangers shatter lives in a matter of seconds. The Decade can help thwart this needless loss of life. I call on member States, international agencies, civil society organizations, businesses and community leaders and people everywhere to ensure that the Decade leads to real improvements.”

Mr. Ban Ki-moon,
United Nations
Secretary-General,
11 May 2011

Mr. Christian Friis Bach (left), UNECE Executive Secretary and
Mr. Ban Ki-moon, United Nations Secretary-General

Efforts to further road safety on an international scale were insufficient until 2003, when the United Nations General Assembly adopted Resolution 57/309, which highlighted the rapid global increase in road traffic deaths, injuries and disabilities. It also cited the disproportionate fatality rate in developing countries and the negative impact of road traffic injuries on national and global economies, and requested the United Nations Secretary-General to submit a report on the global road safety crisis. The United Nations General Assembly followed in 2004 with Resolution 58/289, which recognized the need for the United Nations system to support efforts on global road safety. In November 2009, the first Global High-Level Conference on Road Safety in Moscow was another turning point. In 2010, as a follow-up, the United Nations General Assembly Resolution 64/255 declared 2011–2020 as the United Nations Decade of Action for Road Safety. Currently, the institutional momentum seems to be growing with the second High-level Conference on Road Safety scheduled for November 2015 in Brasilia; and, even more so, with the global road safety target set in the Sustainable Development Goals and endorsed in September 2015.



“I am convinced that this United Nations programme initiated by the Russian Federation will help to reduce road traffic injuries and enhance road safety throughout the world.”

Mr. Dmitry Medvedev, President of the Russian Federation, marks the start of an ambitious international programme, the United Nations Decade of Action for Road Safety, on 8 April 2011.

The five pillars with tasks of the United Nations Global Plan for the Decade of Action for Road Safety



Road safety management

- Adhere to/fully implement the major United Nations road safety-related agreements and conventions, and encourage the creation of new regional instruments
- Establish a lead agency
- Develop a national strategy
- Set realistic targets for activities
- Ensure sufficient funding
- Establish and support data systems



Safer road users

- Increase awareness of road safety risk factors and implement social marketing campaigns to influence attitudes (including behaviour, for example in tunnels and at level crossings)
- Set and seek compliance with speed limits, drink-driving laws, laws and rules for motorcycle helmets and use, seat belts, child restraints, and commercial freight and transport vehicles, among others
- Reduce work-related road traffic injuries
- Promote the establishment of graduated driver licensing systems for novice drivers



Safer roads and mobility

- Promote road safety ownership and accountability among road authorities, road engineers and urban planners
- Promote the needs of all road users
- Promote safe operation, maintenance and improvement of existing road infrastructure (including tunnels and level crossings), and the development of safe new infrastructure
- Encourage capacity-building and knowledge transfer in safe infrastructure, as well as research and development in safer roads and mobility



Safer vehicles

- Encourage the application of motor vehicle safety regulations
- Encourage the implementation of new car assessment programmes, seat belt and anchorage measures, the deployment of crash-avoidance technologies, and the use of fiscal or other incentives for vehicles with high safety standards
- Encourage government and private-sector fleet managers to use vehicles with high safety standards



Post-crash response

- Increase responsiveness to post-crash emergencies
- Improve the ability of health and other systems to provide appropriate emergency treatment and longer-term rehabilitation for crash victims

The United Nations Global Plan for the Decade of Action for Road Safety

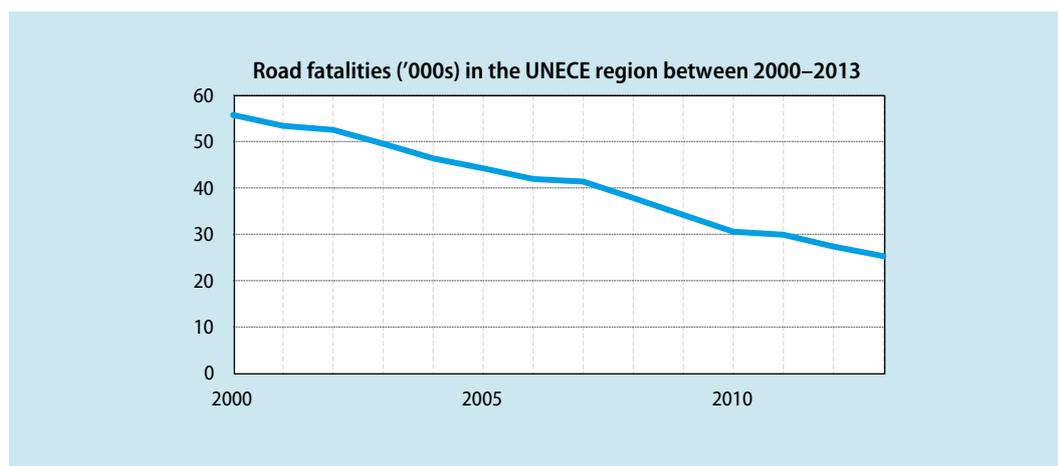
The Global Plan's premise is that road traffic deaths and injuries *can* be prevented. Making it happen at a national level includes adequately funding a dedicated road safety body, providing a strategy and plan with measurable targets, designing safer roads, acceding to and enforcing United Nations conventions, and raising public awareness – all of which form part of a comprehensive approach to road safety that is paramount to addressing the problem. The current “decade” provides time for concerted action – globally, regionally and locally.

The overall goal of the Decade of Action for Road Safety is first to stabilize and then to reduce the forecast level of road traffic fatalities around the world by 2020. This was meant to be achieved by working within the Global Plan's five pillars. The Plan specifies tasks for road safety plans at national or regional levels.

While there has been good progress to date in the UNECE region to decrease the number of road fatalities, the estimated number of deaths worldwide shows no overall reduction (about 1.25 million deaths annually).¹ This means that fatalities have increased in countries outside of the UNECE. Moreover, overall vehicle traffic is forecast to increase, particularly in low and middle income countries where United Nations road safety legal instruments are generally not well known and used.

With safety still a challenge in other parts of the world, it is time to share solutions and, especially, the basic ideas of accession, implementation and enforcement of United Nations road safety legal instruments.

Despite sustained growth in the number of vehicles, UNECE countries have experienced a steady drop in road traffic crashes, injuries and deaths over the past decade



Action is seen as the most important factor in reducing road traffic death and casualty rates. Ambitious objectives are setting the stage for greater efforts among regions and countries. The 17 Sustainable Development Goals (SDGs) adopted by the United Nations General Assembly in September 2015 includes two significant mobility objectives. Not only will United Nations member States need to address SDGs, but they will also be expected to use them as a basis for developing policies over the next 15 years.

A specific stand-alone target was included in the Health Goal to reduce road traffic fatalities by 50 per cent by 2020. In addition, a target on sustainable urban transport in the Cities Goal was approved.

SDG 3 Target 6

By 2020, halve the number of global deaths and injuries from road traffic accidents

SDG 11 Target 2

By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons

“The question here is not whether the target is achievable but rather if there is enough political will and finance to achieve these goals.”

*The Guardian,
7 May 2015*

UNECE ITC: Continuing on the road to 2020 and beyond

The specific UNECE ITC Road Safety Action Plan adopted in 2012 is directly aligned with the Global Plan and contains the following three objectives:

1. To ensure the widest possible geographical coverage of United Nations road safety legal instruments;
2. To assist countries in the UNECE region and beyond in implementing the Decade of Action for Road Safety;
3. To make progress in stabilizing and reducing road traffic fatalities in the UNECE region and beyond.

In the plan, UNECE is to work on developing and improving the regulatory basis for road safety, and on providing technical assistance. Its specific goals are based on the Global Plan's five pillars.

UNECE ITC Road Safety Action Plan Goals (2011–2020)

	Road safety management	<ol style="list-style-type: none"> 1. Boost political will and support government strategies
	Safer road users	<ol style="list-style-type: none"> 2. Protect vulnerable road users 3. Turn road safety training, education and behaviour into knowledge management 4. Raise awareness, fundraise and advocate for road safety
	Safer roads and mobility	<ol style="list-style-type: none"> 5. Make roads safer (including tunnels, rules, signs and signals) 6. Make technologies work for safer mobility
	Safer vehicles	<ol style="list-style-type: none"> 7. Make vehicles safer 8. Improve cargo safety 9. Improve the safety of transporting dangerous goods
	Post-crash response	<ol style="list-style-type: none"> 10. Mitigate the impact of road crashes 11. Learn from road crashes

DID YOU **know?** Shepherds can also be drivers



According to the 1968 Convention on Road Traffic, individuals guiding their animals are also considered to be drivers. They have an obligation to be in control at all times of the animals they are guiding.



Boost political will and support government strategies

INTRODUCTION

The difference makers: Political will and government strategies

Every year, the number of people dying globally in traffic accidents equals the total population of Estonia. And in the 10 years of the Global Plan, the number will likely surpass those living in Belgium – or the Czech Republic, Tunisia, or Cuba. It bears repeating: the world loses populations roughly equivalent to one of these nations every 10 years because of deaths on the roads. Indeed, how many countries can we stand to lose?



– and budgets are tight. To address the time factor, the Global Plan judiciously notes that “a Decade would provide a time frame for action to encourage political resource commitments both globally and nationally,” for low-, middle- and high-income countries to address their specific needs.

While budgets and costs tend to have more immediate impact, attention is being given to how costs can be spread and how they relate to the bigger picture. A life lost can be calculated as the contribution that person could have made to society, which over the years is substantial. In comparison, the cost of preventing that death is significantly less. Using speed bumps at high-risk junctions in sub-Saharan Africa costs \$7-10 per death or injury avoided, and the cost of a fence for separating cars and pedestrians in South Asia can cost just \$135.² Hundreds of thousands of injuries and deaths could be prevented in South-East Asia through motorcycle helmet legislation and enforcement, which has been estimated to cost around 10 cents per person, per year.³ Just 1-3 per cent of construction budgets is often all that is needed to make roads safer. And, safer roads have much higher returns.⁴

“We know how to build safer vehicles; we know how to build safe roads ... Yet there remain nations and regions that have not adopted these instruments,” notes Jean Todt, United Nations Secretary-General’s Special Envoy for Road Safety.⁵ For middle- and low-income countries, road deaths and injuries can cost up to five per cent of GDP, including medical bills, care and lost output.⁶

If political will needs clearer numbers, the haze has already started to lift. If time and budgets can be earmarked, supporting government strategies should follow. Organizations short of funds are also looking at innovative financing mechanisms as solutions. Some governments are showing encouraging results with concerted strategies, such as Sweden, Norway, Denmark and Japan. Countries are thinking first and foremost about the right approaches to problems rather than simply of ways to spend. For example, high-level officials could be made responsible for chairing committees and programmes, “road maps” could be used for progressive rather than full implementation of measures, and a dedicated national safety agency to lead the cooperation among multi-sectoral stakeholders could consolidate measures. Argentina, Chile and Uruguay have achieved good results with national strategies, thanks to “strong political leadership and institutional changes to improve administration and management” since the Global Plan was announced.⁷ Could other countries be close behind?

Around 3,800 people are killed on an average day because of road traffic. On the world’s roads, “every day is 9/11.”

Der Spiegel, 14 August 2015

Is inaction that could lead to death on the roads more cost-effective than implementing regulations that can save lives and lead to revenues generated by people living and working productively?

STATUS AND RESULTS

KEY RESULTS**Analytical work to develop conventions and create new knowledge**

With respect to road safety management systems, coordinating structures and safe system approach

28 new Contracting Parties

Acceded to major road safety conventions and agreements since 2011

Appointment of the United Nations Secretary-General's Special Envoy for Road Safety**Improved collaboration with civil society**

Consultations held in October 2015

As governments have the primary responsibility for improving road safety, their efforts at *promoting* it are a priority. But they require a clear legal basis, strategies with goals and targets supported by resources and joint efforts among stakeholders in international financial institutions, the private sector and non-governmental organizations. The relevant and competent national bodies involved in road safety must improve coordination among themselves, and significant funding and resources for road safety programmes should be sought out through both innovative and traditional forms. Finally, the sharing of best practices is essential.

The United Nations conventions and agreements can be seen as providing the foundations for a clear national legal basis for road safety. Full implementation of these instruments through strategies with clear goals and targets is the way for governments to bring them to life. This work should be underpinned by data collection and use, as well as evidence-based research to design the right strategy and monitor its implementation and effectiveness. The creation of lead agencies with the capacity to develop and champion the delivery of national road safety strategies may be one of the greatest assets of the road safety process.

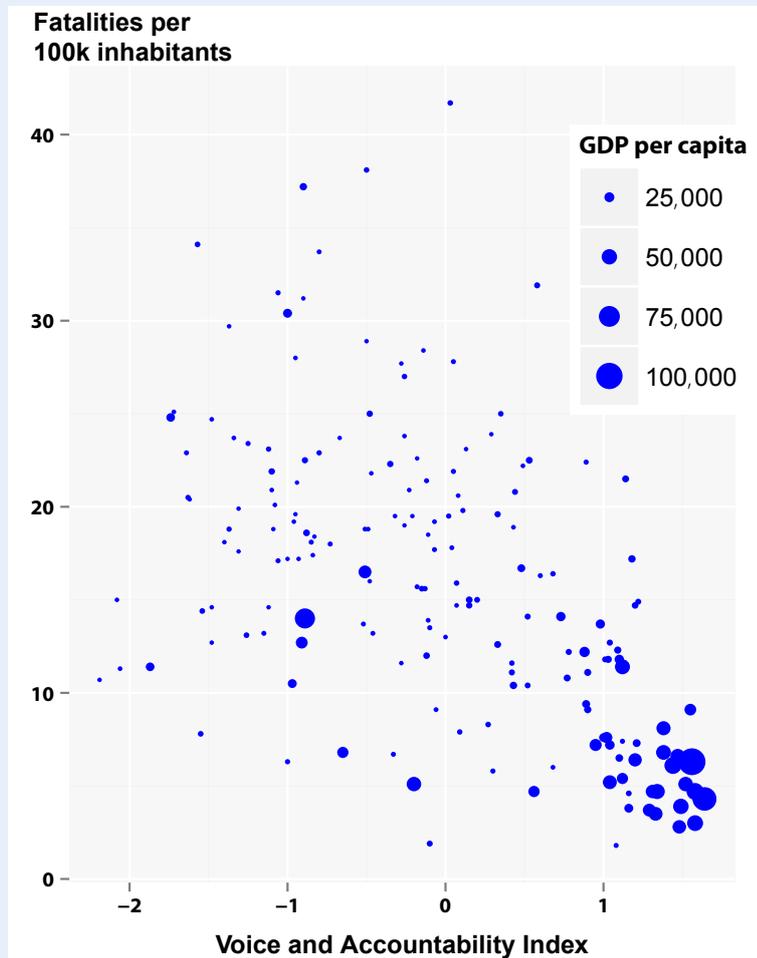
UNECE ITC, as an intergovernmental forum, works both centrally through its Geneva headquarters and, importantly, outside in the regions, countries and communities to build political commitment to road safety, assist governments' accession to the road safety legal instruments, aid with implementing the legal instruments and help in developing national strategies.

**UNECE ITC central tasks****Enhancements to conventions and agreements**

Sweden's "Vision Zero", which has mandated the government to manage the country's roads with the goal of preventing fatalities and serious injuries, has been promoted around the world as an effective tool to enhance road safety. To keep pace with legal and technological developments and align instruments with needs, the UNECE ITC Working Party on Road Traffic Safety (WP.1) is considering a Swedish proposal to amend the UNECE Consolidated Resolution on Road Traffic to include principles of the "safe system" approach to road safety.

DID YOU **know?** Good governance may help advance road safety

Figure: Road accident fatalities per 100,000 inhabitants, by Voice and Accountability Index and GDP per capita (current US dollars): 2010



Sources: World Health Organization, World Bank World Government Indicators, UN Statistics.

Notes: Voice and Accountability Index ranges from -2.5 to 2.5. Higher values represent greater perceived freedom of expression, association, media and voice in selecting governments.

governance with road safety. The World Governance Indicators (WGI)¹¹ are published annually by the World Bank for 215 countries and were used as a proxy for overall governance. Showing high correlation, the WGI's six indices quantify perceptions of good governance, including those on political stability, the rule of law and control of corruption, with higher values representing more positive perceptions.

The figure shows the modest correlation between the Voice and Accountability Index and road accident fatality rates. The figure also shows the relatively low fatality rates and high index values for countries with high GDP per capita. Using regression analysis to control for GDP per capita, the UNECE found a strong relationship (more so than for other WGIs) between higher Voice and Accountability Index values and lower fatality rates.

In a separate analysis,⁸ the UNECE investigated the relationship between road safety and certain aspects of governance. Using data from 181 countries in 2010 as published by WHO,⁹ a comparison of road accident fatality rates between countries which were and were not Contracting Parties to the 1968 Convention on Road Traffic¹⁰ as of 2010 shows a slightly lower rate for Contracting Parties on average (14.1 vs 16.6 fatalities per 100,000 inhabitants per 100,000 inhabitants for non-Contracting Parties). However, the risk of self-selection bias comes with such a simple analysis, as acceding to this convention could be an effect of other road safety measures rather than a cause.

To further examine the relative influence of additional factors, the UNECE secretariat studied the relationship of overall quality of

Standardized statistics for better comparisons across countries

Statistics are crucial because they help to understand a country's situation before it develops concrete and appropriate road safety measures. The UNECE ITC Working Party on Transport Statistics (WP.6) has worked in five broad measures on the use of statistics, and it continues to:

- develop appropriate and common methodologies and terminology for harmonizing road safety statistics, which greatly improve their use for making comparisons internationally;
- develop and maintain the UNECE Transport Statistics Database to ensure the availability of high-quality, timely, relevant and user-friendly statistics;
- minimize duplication and reduce the burden on member States by coordinating statistical activities among international organizations;
- provide a forum for exchanging experiences, best practice and guidance on statistical challenges;
- organize presentations and exchanges on data collection, from the time of accident to data dissemination.

*You cannot
manage what you
do not measure*

UNECE international work and collaboration

Road safety performance audits



Can you spot the difference?

Road safety performance audits can benefit countries in establishing road safety strategies. UNECE, in collaboration with two regional commissions (Economic Commission for Latin America and the Caribbean [ECLAC] and Economic and Social Commission for Asia and the Pacific [ESCAP]) and with funding available from the United Nations Development Account, is initiating such audits in a project for two countries in the UNECE region, and one country from each of the ECLAC and ESCAP regions.

Among other aspects, the performance audit will focus on appraising the national legal framework for road safety and how it conforms to regulations in international legal instruments. It will also assess the effectiveness of the institutional framework in managing road safety.

New frameworks for national road safety lead agencies

Experience suggests that clarity on “who does what” and an adequately funded lead agency are critical parts of a sustainable response to road safety: an agency makes decisions, manages resources and coordinates efforts, all of which are crucial when dealing with complex subjects and multiple parties and stakeholders. UNECE works to recommend management and coordination structures, most recently within Europe and Central Asia. Profiles of national road safety management systems in 24 countries are being prepared, with a review of on-the-ground experience and good practices.

“Road maps”: Practical guides for UNECE road safety governance

United Nations conventions and agreements sometimes have provisions that allow for progressive implementation. Gradual step-by-step execution can be extremely beneficial for countries that do not yet have the institutional capacity or fiscal means to achieve immediate and full implementation. The ITC Working Parties and UNECE secretariat also occasionally prepare road maps that guide the accession and implementation of the conventions they manage. To date, they have prepared three road maps: “ADR: Road map for accession and implementation”, “World Forum for Harmonization of Vehicle Regulations (WP.29) – How It Works, How to Join It” and “Driver fatigue kills: Road Map for the Accession to and Implementation of the European Agreement concerning the Work of Crews of Vehicles engaged in International Road transport (AETR)”.

DID YOU **know?** UNECE provides technical assistance

Besides its regulatory and analytical functions, UNECE is engaged in policy dialogue and provides technical assistance and capacity-building workshops. Working with country experts, UNECE staff disseminate critical knowledge, reinforcing that “knowledge shared is knowledge gained”.



Mr. Miodrag Pesut (left), UNECE, and Mr. Imre Kern, State Secretary, Ministry of Construction, Transport and Infrastructure, Republic of Serbia

A case in point: Serbia

UNECE organized a regional workshop in October 2014 in partnership with the Government of the Republic of Serbia and the Regional Cooperation Council in Belgrade, with support from the World Bank and the Government of Italy. The workshop brought together a wide range of road safety stakeholders and interested parties from the public and private sectors to discuss such issues as establishing a lead agency or other coordinating bodies, developing a national strategy, setting realistic and long-term targets, securing sources of funding, and ongoing monitoring and evaluating through data support systems. While the primary focus was on South-East Europe and the Western Balkans, participation of experts from other UNECE countries brought additional insights on good practice and experiences from across the UNECE region.



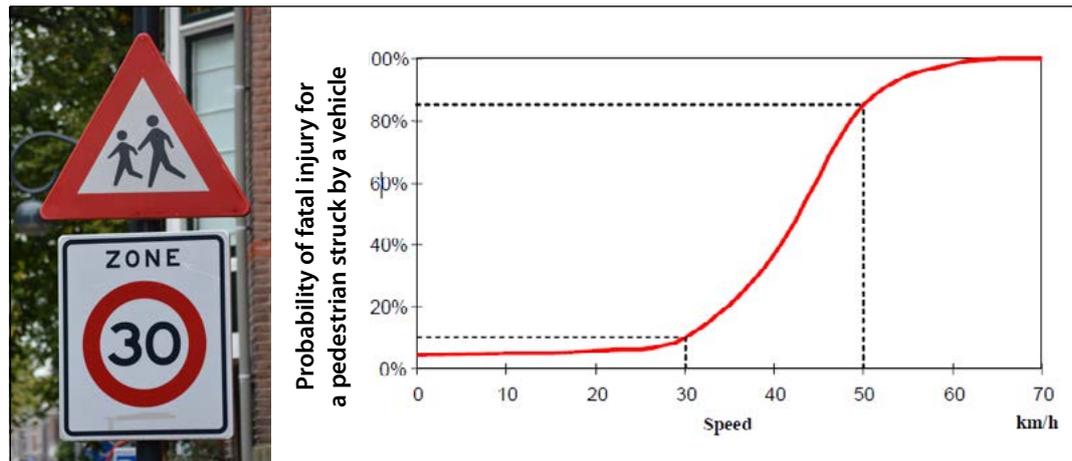
Safer road users

Goal 2

Protect vulnerable road users

INTRODUCTION

Deadly at 50 km per hour: The dangers on earth



Nearly 80 per cent of pedestrians do not survive accidents involving a car moving at a speed of 50 km per hour or above.¹² At 30 km per hour, however, 90 per cent are expected to survive.

Half of the world's road traffic deaths occur among the three key vulnerable user groups: motorcyclists (23 per cent), pedestrians (22 per cent) and cyclists (5 per cent). Moreover, as reported in 2013, only 79 countries had policies that provided protection for pedestrians and cyclists by separating them on the roads from motor vehicles and high-speed traffic;¹³ more recently, 92 countries reported having national or regional policies to encourage walking and cycling.¹⁴ Although governments increasingly recognize the need to promote alternative forms of mobility, more emphasis is required to make these modes of transport safe. One of the new Sustainable Development Goal states that particular attention in road safety must be given to "the needs of those in vulnerable situations, women, children, persons with disabilities and older persons".¹⁵

Vulnerable situations abound. While pedestrians are the most exposed, two-wheeled vehicles lack the protection and reinforcement that a car or truck would provide. For all, adapted situational infrastructure, protective gear, proper behaviour, knowledge and awareness are required.

People often find themselves in vulnerable situations. Road traffic safety efforts have great potential to deal with them.

STATUS AND RESULTS

The 1968 Convention on Road Traffic and its 1971 European Supplement cover many of the areas concerned with protecting road users. The benefit of achieving progress in this area is that it is largely pre-emptive: problems are anticipated and dealt with before they can happen.

Vehicle drivers must follow traffic rules that cover pedestrian crossings, as well as know how to behave near processions of school children and passengers boarding and descending from public transport vehicles. Pedestrians, for their part, need to follow rules of comportment on sidewalks, obey light signals and follow certain behaviour when walking along carriageways. Moreover, a large number of the activities initiated by two key UNECE ITC bodies – WP.1 and WP.29 – enhance pedestrian safety and that of other vulnerable road users.



In addition, the contexts are much broader than just concentrating on vulnerable users themselves. Drivers become directly involved with “vulnerable” situations. UNECE has helped to advance the introduction of adaptive dipped beams that light up objects on or at the side of roads which conventional vehicular static lighting systems would not “see”, thus helping drivers avoid roadside pedestrians. Camera monitoring systems will probably replace all rear-view mirrors to eliminate blind spots for drivers and provide warnings about distances to fixed or moving objects. And as some advances in safety may not be “safe” for others, considerations for hearing- or vision-impaired users indicate the breadth of attention that UNECE gives to all road safety issues.

KEY RESULTS

Adoption of biofidelic test tools to design more pedestrian-friendly vehicles

Launch of safe cycling

Under the Transport, Health and Environment Pan-European Programme (THE PEP)

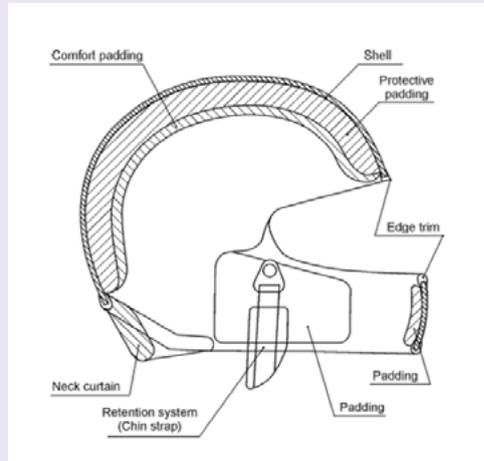
Showcasing of benefits from the correct use of helmets

UN Regulation No. 22 offers the best head protection

Dealing with duality: Fighting noise pollution and addressing concerns about silent vehicles

Not all road traffic improvements lead to blanket benefits. Quieter traffic from reduced sound emissions, noise-reducing roads and silent vehicles are great for some, but for those visually impaired, the lost auditory “cues” of traffic could make life more dangerous. For those with poor hearing, the remaining sound of traffic may be lost. The goal of protecting vulnerable users can lead, for example, to regulations that will ensure minimum sound requirements for hybrid and electric vehicles. And while quiet vehicles are desired, minimum vehicle sound requirements are also the focus of specific United Nations GTRs driven by the World Forum for Harmonization of Vehicle Regulations. Their implementation will help to warn not only visually-impaired but also severely hearing-compromised users about approaching traffic.

DID YOU **know?** You should use helmets that meet the United Nations standards



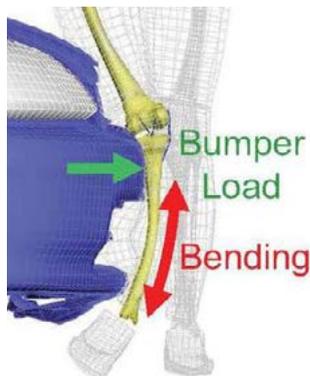
In European countries alone, about 75 per cent of deaths among motorcycle users result from head injuries.¹⁶ And with the rapidly growing worldwide popularity of electric bicycles – with pedal assistance and motors that can generate speeds of over 30 kilometres per hour – the definition of what is a bicycle or a moped is under scrutiny and could impact future helmet legislation.

For motorcyclists, wearing a standard, good-quality helmet can pay big safety dividends: such a helmet can reduce the risk of death by 40 per cent and the risk of serious injury by over 70 per cent.¹⁷ Manufacturers of other helmets, for example cheap «tropical»

helmets, may compromise on United Nations safety standards, leading to a false sense of consumer security and to disharmonizing existing requirements. Such manufacturers should be strongly encouraged to meet the standards of United Nations Regulation No. 22. In 2011–2015, this Regulation was amended seven times. Helmets are now tested using a 1,500 kg pressure test, and straps are made of fire-resistant fibre.



A Regulation No. 22 helmet vs a "tropical" helmet: can you spot the difference?



UNECE efforts on safety for pedestrians

UNECE adopted new testing in 2014 to make cars more pedestrian friendly. Thanks to this testing, serious and fatal injuries from car accidents involving pedestrians may be dramatically reduced.

Known as FLEX-PLI, the new leg form test tool embraces the latest technological advancements and more accurately measures the level of injury caused by a car's bumper when it impacts a human leg. This level of harm can be the deciding factor between a serious or minor injury. With the most accurate measure of injury available, more pedestrian-friendly car bodies can be designed and injuries mitigated.

Safe cycling: A popular theme demanding more attention

Recognizing the crucial connection between transport, health and the environment, UNECE (Environment and Sustainable Transport Divisions) and the WHO Regional Office for Europe are engaged in promoting physically active mobility through the Transport, Health and Environment Pan-European Programme (THE PEP) and its partnership for cycling promotion that aims to prepare the Pan-European Masterplan on Cycling Promotion. THE PEP is a unique intersectoral and intergovernmental policy framework to promote mobility and transport strategies that integrate environmental and health concerns.

The increasing number of cyclists bodes well for modal shifts, particularly in urban areas. However, the appropriate infrastructure required will need to keep pace with growing popularity, which will prove difficult for some cash-strapped cities. UNECE actively works with governments, as well as cities at the local level, through THE PEP Partnerships and relay race workshop series. These efforts help to bring users of different transport modes up to speed on rules and regulations for proper behaviour when sharing the same roads.

DID YOU **know?** **Bicycle traffic gains more and more attention**



In Japan, Onomichi Port is promoted as a "cycling port".

Cities are taking ever more serious looks at bicycle traffic. While Amsterdam and Copenhagen are already known as being bike friendly, over 100 cities are now closing their centres to cars on weekends. Car ownership is down in Paris, and the number of cars entering central London has decreased by at least 30 per cent since 2002.¹¹



Safer road users

Goal 3

Turn road safety training, education and behaviour into knowledge management

INTRODUCTION

Are there cultural keys to driving behaviour?

Everyone loves freedom and being able to act as they deem appropriate, but harmonizing road traffic *behaviour* as much as possible among users is fundamental to ensuring safe circulation on the road.

Gaining insights on how best to train and educate road users, as well as the impact of culture on behaviour – culture's role in how people act and why they do so – is an ongoing undertaking. And the ability to access, discern differences in and use relevant information, and to transform it into knowledge and capabilities, is also why knowledge management will become increasingly important.

While cars and vehicles in many countries must pass regular technical and safety inspections, drivers are often not held to similar standards when it comes to taking driving tests. Often they get by with one test and have a permit for life. And increasingly, people on the roads lack up-to-date knowledge about safety, which is exacerbated when certain groups are unwittingly put in compromised situations: those hard of hearing; older drivers with increasing reaction time and decreasing sight, others on medication, and some even with dementia. To prove that they are still able to drive, people over 70 years old need a health examination every five years in the Netherlands, and every three years in United Kingdom of Great Britain and Northern Ireland and Sweden. Rules are also strict in Spain: drivers who are at least 45 years old take a hearing and vision test, then a test every 10 years and, finally, once every two years after the age of 75. This is not the case in Germany, where drivers are less bound by such checks.¹⁹



Culture eats strategy for breakfast?

STATUS AND RESULTS

People's actions while on the road are believed to be the biggest influence on the number of accidents. The 1968 Convention on Road Traffic set the obligation for domestic legislation to establish minimum requirements for the qualifications of driver training personnel and their curricula. Further, the UNECE Consolidated Resolution on Road Traffic addresses drink-driving through recommendations on legislation, enforcement, education, information and campaigns. Even "fatigue", a great concern on the roads, is covered; the UNECE-administered 1970 European Agreement concerning the Work of Crews of Vehicles Engaged in International Road Transport provides provisions to regulate professional drivers' work and rest periods.

How does UNECE ITC seek to understand and ultimately affect road-user behaviour? Since the United Nations Decade of Action for Road Safety was announced, it has commissioned a paper on the cultural influences affecting behaviour as a way to shed more light on this critical – and controversial – topic. Cultural and other characteristics, such as social norms, the quality of police enforcement, religion, socioeconomic level, violent conflict, experience and the need for sensation all influence driving behaviours. The preliminary and yet to be published report, *Cultural Differences and Traffic Accidents*, raises the question how broader cultural differences relate to road safety.²⁰

KEY RESULTS

Knowledge improved on the impact of cultural differences on road safety

Launch of an e-book on the main issues influencing alcohol-related accidents

Covering the impact on pedestrians, cyclists and motorcyclists, with examples from Europe, Africa, Asia, Australia and the Middle East

Cultural differences and road safety – what has been learned?

Cultural differences have an impact on the danger or safety of the world's roads

American, Chinese, German, Israeli, Japanese and Swiss drivers, to name just a few, show differences in attitudes towards driving. Some ethnic groups, for example, fail to use child restraints out of fear of harming their children. Others are insulted when a passenger buckles up. Motorcyclists have different driving styles when entering and exiting rural areas, cyclists face safety dilemmas in developing countries, and the lack of interior mirrors in vehicles can induce a certain driving style. These cultural characteristics may be reasons for dangerous traffic behaviour.



Remedies, solutions and interventions differ in their approach and effectiveness

The governments of various countries have different levels of influence on traffic safety. Internationally, different tools are used to convince parents of different faiths to buckle up and use child restraint systems for their children. Enforcing speed limits is inconsistent; it can end up either being a success, having no effect at all or leading to a rise in accidents. Some countries have success with small, inexpensive and limited tools, while others require huge efforts and multiple tools to achieve the same goals.

The term "cultural" difference rarely appears in scientific publications. Is this creating a false sense of political correctness?

The terms used (and only infrequently) include traffic culture, safety culture, social norms, group differences and social pressure. Yet, while culture can be directly influenced (e.g. making drinking and driving socially unacceptable), elements of culture are needed to drive change (e.g. gender-specific roles or positive, religious values) and ultimately influence road user behaviour. Psychological models have shown that a person's tendency to take on risky behaviour for its perceived social benefits can be countered by a cultural "backlash" of behaviour by groups that also make a strong impression on those individuals. Consider young men who may choose to speed and take on other risky driving behaviour because it is "cool" to do so. They may believe they make a positive impression on young women through aggressive driving, until they are admonished precisely by the opposite sex to follow the rules.



A dedicated parking spot for handicapped in Almaty, Kazakhstan

Thinking globally only goes so far – acting locally is crucial

Local adaptations of a global strategy serve many companies well. Can this same marketing approach be taken for accident prevention? Similar behavioural problems leading to accidents exist across the world, but the relative proportions of the different problems differ from country to country, and from culture to culture. These problems and their varying presence include:

- Governance which may lead in some places to respect for the law, but in others to disrespect;
- Differing income levels which determine how long vehicles are kept in service, as well as the method of transport, quality of the infrastructure, availability of emergency services and the social role of driving;
- Different levels of education and knowledge about the dangers and safeguards related to driving;
- Traditional, religious or fatalistic ways of thinking, which influence the relationship to the law, risk perception, willingness to take preventive action and the tools available to solve safety problems;
- Secondary gains and attributes connected to driving – from pure transport to a symbol of “male power”;
- Different ethnic groups within one country having different attitudes and reactions to reinforcement of messages;
- Social acceptability or rejection of dangerous behaviour (e.g. driving under the influence of alcohol and/or drugs, or speeding);
- Perceptions of road users (e.g. some are concerned about hurting others and others may be concerned about being sued).

Even with regard to traffic violations, receiving a citation is a shock that changes driving behaviour, whereas for others it is a business expense. Such differences in response to interventions can be seen through cultural differences:

- In one country, enforcing speed limits has a minor effect on speeding but causes a decline in accident rates. In another, speeding offences decline but the accident rate climbs significantly;
- The effectiveness of graduate driving licence programmes depends not only on their content and requirements, but also on cultural differences;
- Only primary enforcement can get some people to change their seat-belt-wearing behaviour. Others react also to secondary enforcements;
- In Sweden, enforcing speed limits causes a vast reduction in speeding offenses so that relatively few drivers are penalized, while elsewhere some drivers receive citations for speeding year after year.



What makes drivers break the rules may not be the right question. It may actually be what makes them *follow* the rules

Contrary to these group differences, some areas and issues appear to be the same around the world. Take wearing seat belts: attempts to encourage this without police enforcement in many countries simply do not work satisfactorily. Evidence shows that to get a dramatic change in the number of people buckling up, real, visible and consistent enforcement is required, coupled with education. Culture does not play a large role here because, in terms of the decision process, no competing benefit exists. All that is needed is to identify what motivates

people and how much it motivates them to behave correctly and respect the rules, and from there it should be easier to make changes.

The principles are known, the tools are available – so why wait to act? Can all groups be taken into account? Should different solutions be offered in different geographical, cultural and ethnic regions? The answer is clearly yes. Traffic safety is highly dependent on leadership and the quality of governance and acceptance by the broad public.

Encouraging personal commitments to not drink and drive

UNECE has found that poster-signing ceremonies during events, where attendees express a personal commitment to improving road safety, have proven instrumental in getting both the public and other constituencies to vow to act. By signing a large, custom-made “We don’t drink and drive” poster, participants at an international symposium on “Regional Perspectives on Drinking and Driving”, organized in 2014 by UNECE in partnership with the International Centre for Alcohol Policies, did just that. Experts from Europe, Africa, Asia and the Middle East presented and discussed the main issues influencing alcohol-related accidents from their regional perspective. This also included vulnerable road users (VRUs) such as pedestrians, cyclists and motorcyclists, and the lesser explored topic of drunken VRUs.



If people were to wear seat belts in their cars, wear helmets ... [and] if we could keep people from speeding too much and enforce drunk-driving laws, you could make an enormous difference in the number of people killed

Michael Bloomberg, Mayor of New York City (2002-2013)

Battling drink-driving in Africa

UNECE, the United Nations Economic Commission for Africa (UNECA) and the International Alliance for Responsible Drinking launched a publication in March 2015 focused on improving road safety and reducing drink-driving in Africa. The e-book includes new survey results on road safety issues across the African continent and provides updates on the implementation of the African Road Safety Action Plan. It contains recommendations and international good practices to improve road safety, as well as videos and presentations from the Road Safety Regional November 2014.



Mr. Soteri Gotera, UNECA, at the regional workshop in Addis Ababa

DID YOU know? A number plate can say “SAFECAR”



Currently, number plates can only consist of numerals or a combination of numerals and letters, according to the 1968 Convention on Road Traffic (Articles 35 and 36, and Annex 2). These provisions, when and if amended in 2016, will allow number plates to also consist of letters only, resulting in number plates conveying personalized information such as “SAFECAR” or “LW LUVS MKW”.



Safer road users

Goal 4

Raise awareness, fundraise and advocate for road safety

INTRODUCTION

Once isn't enough: Awareness-raising for road safety



If you stand on the side of the road and count the number of cyclists not wearing helmets, you may be surprised at the number. And while research on helmets can be somewhat controversial, it is hard to deny that they provide benefits. Also, in spite of raised general safety awareness, many back-seat passengers in vehicles don't buckle up because they think being "in back" is safer – and yet, they can fly forward during an accident, killing passengers in the front seat or severely injuring themselves. Moreover, some passengers riding in cars whose drivers haven't mastered the rules of the road may consider, in the back of their minds, to ask those drivers to stop and let them out.

Yet many are already aware of the dangers of road traffic – so why is this aspect of road safety so important? Because it demands perseverance and patience. As with traditional product advertising, one exposure to a message doesn't lead to total understanding; it requires repeated communication to take notice, and an additional series and even interaction via a promotion or event to engage a person to change

behaviour or accept something new. Stick-to-it-iveness is as much a part of propagating the principles of road safety as getting consumers to buy a new shower gel.

Interaction is vital to raising awareness, with as simple an exercise as children acting out road-safety principles on a floor-assembled design of a city scene. Even signing a poster, as a personal commitment to road safety can, by the very act of giving one's signature, start to induce a change in behaviour. While such behavioural change may not necessarily lead to a decrease in fatalities, it does signify the importance of people being committed and taking action. Efforts at informing citizens about safety laws, and making those laws stick, can be unexpectedly affordable and effective. In Ivanovo, Russian Federation, the proportion of people wearing seat belts rose from 48 per cent in 2011 to 74 per cent in 2012 following a clampdown by police and a social-media campaign.²¹

Raising awareness and advocating for road safety could take inspiration from recent considerations on how to raise funds. Innovative means of financing can supply a sizeable part of an organization's funding needs (see below). Nevertheless, raising awareness, fundraising and advocating for road safety must continue, from the grass-roots level to the international stage – and no matter the size of budgets – to ensure strong, appropriate messages and their daily dissemination.

STATUS AND RESULTS

At the most basic level, awareness-raising and advocacy efforts on road safety must aim to reach a maximum audience and have the greatest impact possible. This covers interaction at every level – from exchanging best practices among governments to signing one’s pledge to follow road safety rules, and to engaging in one-to-one contact with citizens at local events.

UNECE calls on numerous ideas and methods that allow for such coverage. This can range from important audio-visual media, including road safety films, to programmes reaching youth, regional events covering larger geographic areas and commemoration days riding high levels of attention from participating audiences. Moreover, a new, innovative United Nations funding scheme is under consideration to help countries hampered by limited resources and critical budgetary impasses to finance activities with potential catalytic impact.

KEY RESULTS

Production of UNECE Road Safety films

Useful awareness-building tools regarding road safety in general or for a particular aspect such as level crossing

Organization of numerous events promoting road safety

Addis Ababa, Belgrade, Geneva, New York City

UNECE Road Safety: Bringing the rules to life

Launched in March 2011, this eight-minute video synopsis of road safety issues, interspersed by commentary from children, highlights key subjects of UNECE ITC’s purpose and work in the area. It has been used at numerous events.

“We Play and Drive by the Rules”

Tie-ins with the International Basketball Federation (FIBA) and FIBA-Europe in 2009, 2010 and 2011 created road safety promotional campaigns and reached many basketball fans, particularly from the youth target group. “We Play and Drive by the Rules” was an innovative programme with both the Basketball World Championship in 2010 and EuroBasket in 2011.



Getting audiences involved: UNECE interaction is vital to conveying messages

Global Road Safety Week 2013, interactive lecture: scouts develop own traffic safety plans

UNECE partnered with the World Organization of the Scout Movement, Scouting Ireland and the Hellenic Road Safety Institute “Panos Mylonas” to give 50 young leaders from its global Rover Scouts Programme the opportunity to participate in an interactive lecture given by Professor Claes Tingvall, one of the creators of the Sweden’s “Vision Zero” concept. The Rover Scouts could develop and present their plans (from a young person’s perspective) on modernizing pedestrian-related aspects of the 1968 Convention on Road Traffic.

DID YOU know? Road safety can be promoted in many ways



UNECE, together with the Italian Ministry of Infrastructure and Transport, ASTM-SIAS, QN-II Giorno and leStrade, distributed 230,000 specially commissioned bookmarks distributed at local schools and motorway tollbooths, the latter located along approximately 1,300 km of motorway in Lombardia, Piemonte, Liguria, Valle d’Aosta, Emilia Romagna and Toscana.

Poster-signing ceremony 2013: committing to safe level-crossing behaviour

Participants in the International Level Crossing Awareness Day (ILCAD), organized by UNECE in partnership with the International Union of Railways (UIC), concluded the fifth-annual ILCAD by personally committing to safe level-crossing behaviour at a poster-signing session. Round-table discussions on the three “E’s” of safe level crossing – **e**ducation, **e**ngineering and **e**nforcement – highlighted the programme for participants from Estonia, Greece, India, Italy, Switzerland and the United Kingdom.



Mr. Andrey Vasilyev (left), UNECE Deputy Executive Secretary “Scouting for Global Road Safety” with Ms. Vassiliki Danelli-Mylona (centre) and Mr. John Lawlor (right)

Further UNECE awareness-raising across regions

Memorial sculpture in Greece

UNECE unveiled a memorial sculpture dedicated to the United Nations Decade of Action for Road Safety at the Christos Polentas park in Chania, Greece, initiated by the Association for Support and Solidarity to Families of Victims of Road Traffic Crashes.

Europe – Asia Road Safety Forum

UNECE organized an inaugural “Europe – Asia Road Safety Forum” in New Delhi, India followed by a two-day session of the Working Party on Road Traffic Safety. The event was organized in partnership with the Ministry of Road Transport and Highways of India, the Institute of Road Traffic Education in New Delhi and the International Road Transport Union, and in collaboration with the United Nations Economic and Social Commission for Asia and the Pacific.

Road Safety Treaty Day: Presentations on global safety instruments at United Nations headquarters

UNECE organized a Road Safety Treaty Day in collaboration with the United Nations Office of Legal Affairs, the Regional Commissions New York Office and the International Road Transport Union, at United Nations headquarters in New York. The programme included presentations on global road safety instruments, such as the 1968 Convention on Road Traffic, the 1968 Convention on Road Signs and Signals, the 1958 and the 1998 Agreements on Vehicle Regulations as well as international rules on the carriage of dangerous goods.

United Nations Global Fund for Road Safety: Engaging the Special Envoy for Road Safety

Lack of funding for road safety activities is a major obstacle in many countries as well as at the global level. Other global programmes, however, have developed innovative schemes to collect needed resources from various sources.

For example, UNITAID, a global health initiative that is working to find new ways to prevent, treat and diagnose HIV/AIDS, tuberculosis and malaria more quickly, cheaply and effectively, initiated an airline ticket levy that has helped to raise 50 per cent of its funds over recent years.

It is a simple process: the levy can range from one dollar for economy-class tickets to 40 dollars for business and first-class travel, and passengers in transit are exempt. It turns a frequently used travel mode into a major contributor of funds to help the organization fight diseases.

With nine countries using the levy, international financing’s reach has extended to countries that previously had not benefited from such approaches. France alone pledged an annual sum of €110 million from the levy to UNITAID for 2011–2013.



Wish to raise funds for road safety? You need to think outside the box.

The organization’s funding has remained stable, with the ticket levy now seen as a source of sustainable and secure financing. Moreover, France’s tourism industry has seen no ill effects from the levy.

Can the practice of a levy be successfully implemented for raising funds to support projects aimed at preventing road accidents that kill more people annually than malaria? The United Nations Secretary-General’s Special Envoy for Road Safety is working with UNECE to explore innovative options and modalities for establishing the United Nations Global Fund for Road Safety.



Goal 5

Make roads safer

INTRODUCTION

Is a road just a road? Not if it's safe

If many users don't think twice about the roads they travel on, why is making roads "safe" so important? Roads demand as much consideration for safety as vehicles and users. Years of know-how and engineering experience go into building roads properly, signage and signals guide users to help protect them and others, and maintenance takes care of wear-and-tear to ensure a road is more than just navigable. A road becomes dangerous should any one of these elements go missing or not meet standards.

Add to this the differences among road users; they have varying levels of understanding about road conditions and how they should behave. And, importantly, several large user groups require special safety considerations – cyclists, motorcyclists, pedestrians (including elderly people and children) and those disabled. Thus, making roads safer is a bit more complex than setting up a road sign.

Making roads "harmonious" in their construction, appearance and accoutrements such as signage will mean that users spend less time deciphering what to do in problem circumstances, and will significantly reduce their chances of becoming involved in a dangerous situation. Yet, taking into account the heterogeneity of users – their different driving cultures, levels of knowledge and aptitudes – means that work needs to be done to adapt roads, where possible, to those differences.

Roads in Sweden, for example, are now built to favour safety instead of convenience or speed. This underlines the increasing priority of making sure roads follow the rules of safety – because users often don't. The "safe system", like that in Sweden, focuses on providing collision-free roads (see photo below) which limit the possibility of drivers committing errors. Changing from old-type roads to those that are collision-free (13-metre roads) have led to a 76 per cent decrease in fatalities.²²

Having a goal of making roads safer also means getting down to the basics of making it happen. Governments, road authorities and systems managers all need to be committed and involved – to ensure that a road is more than just a road.



STATUS AND RESULTS**KEY RESULTS****Development of a “Road Signs Management System” web tool**

To facilitate the collection and evaluation of signs

Addition of a road safety subchapter to the revised TEM and TER master plan

Road data are regularly collected

Over 26,000 views to date on YouTube of the UNECE film, *Saving Lives at Level Crossings*

Co-produced with the Swiss Federal Office of Transport and International Union of Railways (UIC)

With road users concentrating largely on the act of driving, little time exists to decipher road characteristics, signs and signals. Yet those are extremely important, and it is why the focus of ensuring that roads are safer must work in the context of making roads easily “read” and almost “self-explanatory”. Are signs always placed in the same way? Are internationally recognized and consistent symbols used in place of words? Are messages short? Are sizes of signs and markings appropriate? One understands quickly that the picture needs to be clear, not foggy.

UNECE ITC commitment to safe roads began in earnest long before the United Nations Decade of Action for Road Safety got under way. The 1968 Convention on Road Signs and Signals set up more than 250 commonly agreed reference road signs, prescribed common norms for traffic light signals and uniform conditions for road markings. The 1975 European Agreement on Main International Traffic Arteries provided the cornerstone of the “each road its purpose” philosophy and outlined technical guidance: internationally, roads could be classified as either motorways, express roads or ordinary roads, with each type having its own capacities. This proved essential to help prevent users from over- or underestimating the roads they travel on, since using the wrong behaviour in any particular situation is a major cause of accidents. With roads looking the same, constructed in like manner and having similar signage and markings, a big question mark on road behaviour could be reduced.

Signs and markings work best in harmony

Signs and markings are as much part of road “infrastructure” as the asphalt users drive on. Recognizing the importance of their being uniform to the greatest degree possible across geographic and country boundaries, UNECE ITC tirelessly supports not only new accessions to the relevant conventions, but also the adoption of new amendments to them. The breadth and importance of signs and markings underscore the need to cover the multiple areas where they play a critical role in “managing” traffic, including: public transport • intersections • E-roads • tourist attractions • dangerous goods • cycling routes • traffic lights • speed hump markings • roadworks • variable message signs.

The “safe system”: Putting signs, signals and infrastructure together

A road safety philosophy based on the guarantee that road users will make mistakes doesn’t sound inspiring, but it is already proving its worth in practical examples. For UNECE ITC, the safe system also materializes in level-crossing developments. Taking into account the three “E’s” of education, engineering and enforcement, a group of experts took stock of available data to describe, assess and better understand the safety issues arising at a road–rail interface. It also used this information for a multidisciplinary strategic plan aimed at reducing the risk of death and/or injury at level crossings.



The European Agreement on Main International Traffic Arteries and “sister” projects

The AGR is a broad system, spanning from Central Asia to Western Europe, and includes the aforementioned three types of roads, with each road type corresponding to the exigencies and requirements of its immediate environment. While users must accommodate and change their habits depending on the type of road, that is largely considered to be a daily part of driving.



AGR: Over 30 Contracting Parties are in the network

Ultimately, the AGR network will exhibit harmonious infrastructure across geographies, helping millions of people drive from the Atlantic Ocean to Central Asia. As a result, the number of accidents and their costs should decrease because users will face consistent and similar infrastructure and signage wherever they are, significantly increasing the likelihood that their passage will be safe.

Trans-European North-South Motorway project

Specifically among Central, East and South-East European countries, this project improves the quality and efficiency of transport operations, balances existing gaps and disparities between motorway networks and assists in integrating European transport infrastructure systems.

Euro-Asian Transport Links project

In a similar way, this project identifies main Euro-Asian road and rail routes for priority development and cooperation, creating a mechanism for coordinated development of coherent Euro-Asian transport links.



DID YOU **know?** Few deaths at level crossings but many high-profile risks



Millions of near misses and over 6,000 deaths occur worldwide each year at level crossings,²³ where roads and railway tracks intersect. To raise awareness of this issue, UNECE and partners produced a film in 2014 that highlights the dangers and suggests possible solutions.

The film is aimed at making the public and decision makers more conscious of the dangers at level crossings, and ultimately decreasing the number of accidents and casualties. It was produced in partnership with the Swiss Federal

Office of Transport and the International Union of Railways (UIC).

The loss of life and injury are the most alarming results, but accidents between road users and trains often entail significant economic costs to railway operators, infrastructure managers and railway customers. Wider social impacts of level-crossing accidents can also be devastating, as it is not uncommon for school buses carrying children to be hit by trains. The deaths and injuries of children from the same school may burden communities with pain and trauma for a long time.



Goal 6

Make technologies work for safer mobility

INTRODUCTION

Keeping up with technology



It may be self-evident that technology should be part-and-parcel of road safety measures. So why do we need to think more about it other than building it into systems and vehicles? Because what's obvious to imagine isn't so easy to hold: technological advances are fast, often dramatic and lead to significant changes in processes, behaviour and awareness. Moreover, and importantly, technology is applied to improve safety across all elements – roads (e.g. smoothing traffic flow), vehicles (for example, adaptive cruise control) and users, for whom navigation systems already provide substantial benefits. But because of its speed, technological change often “outruns” the development and implementation of regulations and agreements needed to use it properly and efficiently.

Managing this process and working to shorten the decision-making and development cycles will be critical. While progress in delivering innovations to market is already significant, such as optimized transport systems, electronic toll collection and tunnel safety measures, time is needed to fully work out processes and kinks. Automobile companies have recently had to recall vehicles for software malfunctions that kept car engines running after drivers had tried to shut them off. And, security researchers have shown that an infected MP3 file can disable a car's brakes when inserted into its CD player,²⁴ as well as that full control of a vehicle can be taken via the internet.

Because technological developments often simultaneously affect roads, vehicles and users, the considerations become more complex. Autonomous cars, for example, can work to eliminate much of the human error that causes many road accidents, but such cars will likely require road infrastructure adjustments and innovations to fully ensure their smooth navigation. Lawyers, too, will be needed to answer the myriad ethical, legal and liability questions surrounding potential mishaps that could arise after a “driver” sits in a networked vehicle and starts heading down the road.

STATUS AND RESULTS

It bears repeating that more than two thirds of all crashes are related to intentional or unintentional violation of rules. A higher level of automation during driving may help to significantly reduce the number of road accidents caused by human error.

Automation can apply to both individual signs and the entire transport system. Harnessing the exciting advantages of technological advances in this area will require patience and attention to detail. UNECE ITC, in the midst of these developments, has been – and will continue to be – active in several important areas.

Intelligent Transport Systems: UNECE advances continue

UNECE strategy is to pursue new action and develop policies where Intelligent Transport Systems (ITS) could impact the quality of life and enhance mobility across borders. UNECE has developed the ITS Strategy Package (2012), including a road map. Vehicle regulations already count a number of ITS applications, such as electronic stability control (ESC), automated emergency braking system (AEBS), adaptive cruise control and lane departure warning (LDW), along with the use of modern technology for exchanging information between vehicles and infrastructure.

KEY RESULTS

Development of UNECE ITS Strategy Package

Adoption of Amendment to the 1968 Convention on Road Traffic on driver assistance

Creating and sharing knowledge on automated and autonomous driving

Adoption of the digital tachograph

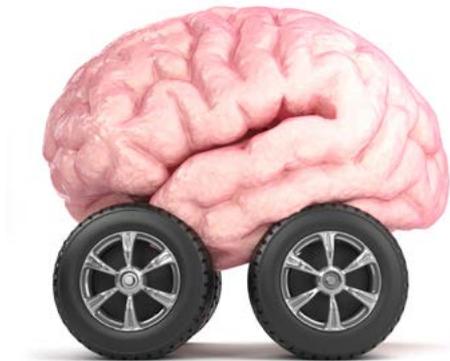
In the UNECE region

Standardization of variable message signs

ITS round tables and workshops

Bordeaux, Brussels, Geneva

How ITS applications affect daily life



With their obvious advances in safety, ITS applications have huge potential to help reduce fatalities and injuries from road traffic accidents. They lead to increased mobility and optimize transport systems, putting less pressure on the environment. Road operators can respond more quickly to emergencies and become more efficient. By predicting traffic and smoothing its flow, uncertainty in travel and the time spent on the road can be significantly reduced. Satellite services (such as navigation systems) and the ability to monitor locations result in better security, and close behind is the increase in comfort, certainly from reduced or eliminated waits due to electronic toll collection. Including parties in development, through

public-private partnerships and the integration of various modes of transport, means that ITS will increase the breadth of services that it touches.

Autonomous vehicles: Challenges and the driver's role

Automation is a characteristic sign of modern times; it has been in many industries, but is dramatically and forcefully increasing its presence in road vehicles and their use, with huge impacts expected on drivers, vehicle producers and governments. And with implications as well for the 1968 Convention on Road Traffic, UNECE ITC is at the forefront of helping to manage the inevitable adoption of automation on the roads. Advanced Driver Assistance Systems have been in development for many years. With these, the driver is still "in the loop" – involved in the actual driving and aware of the vehicle's status and the situation on the road.



Dealing with ethical questions in developing autonomous vehicles is an unavoidable yet critical step in their final development. For example, programming a vehicle to cross a double yellow line to avoid an accident means, in the one sense, that it is being asked to break the law²⁵.

As people don't behave "by the book", but automated cars generally do, the need to bridge the fallible with the correct will never be more pressing. Today's road traffic is complex, with many interactions among its various elements. Because people use the road, technology will need to adapt to human criteria; and, in turn, road infrastructure may need to be adapted to the technology. Moreover, the "soft" human factors – safety, usability and acceptance, as well as institutional and legal concerns – are much more difficult to overcome than those of "hard" technology.

While completely automated driving systems may ultimately lessen the importance of many of these issues, a number of challenges are likely in the foreseeable future.

UNECE discusses the challenges ahead²⁶

Human factors

As people continue to interact with technology, the human factor will still play a role. In any case, this factor must be considered during technological development itself, as the human "element" ultimately influences innovations brought to market.

Responsibilities of both drivers and vehicles

The 1968 Convention on Road Traffic covers the rules for drivers. However, as drivers do not always follow the rules, technology is being used to "support" drivers and help them to stay "in control". Yet, as technology takes over more of these responsibilities, further attention is needed on how the responsibilities are *distributed between* the technology and drivers. Once the vehicle takes control, does it take over the driver's obligations? Because research has shown that transferring authority from the driver to the vehicle occurs in a "grey" area with overlaps, minimizing the need for such transitions is important. In addition, ensuring that the technology can guarantee vehicles are fail-safe in maintaining control, if drivers cannot regain it or do not respond to system failure, will be critical.

Regulating structure

Within UNECE ITC, the Working Parties have been dealing with their respective isolated issues. WP.1 considers road user aspects and WP.29 deals mostly with vehicle technology, whereas the Working Party on Road Transport (SC.1) works on road infrastructure. Because people increasingly interact with technology, greater cooperation between WP.1 and WP.29 will be crucial. In addition, clarifying what is "correct behaviour" for drivers in driver assistance systems will be important. When should the systems be overridden, or when should they be switched off? And, does each government (or Contracting Party) make this decision, as well as which system is built into which cars? Clearly, patchworks of national legislations and regulations must be avoided, and the communication infrastructure to vehicles and vice-versa needs to be addressed.

Workload and human behaviour

While automation aims to reduce errors and increase economy of operation, it may not always reduce workload because people are still engaged – just more mentally than physically. Moreover, automating systems could also reduce drivers' "situational awareness" by cutting back on their involvement with driving tasks. With partial automation, the driver workload is obviously "lumpy", changing with the intensity of traffic and the road layout. But drivers need to understand how and when to turn such systems on or off, otherwise confusion and increased workload during safety-critical scenarios will result. In addition, people will often adapt their behaviour to systems in ways not foreseen or intended by their creators. Such adaptation can only be viewed once systems are in place.

Following a system's feedback and warnings

Warnings may actually carry unexpected consequences: drivers may miss a system's less prominent warnings and may also ignore annoying ones. Indeed, "false alarms" could lead to people ignoring warnings or shutting down alarm systems entirely. Customizable systems, programmed to a user's preferences, may cause havoc with other drivers using those systems.

Over-reliance

Distraction and poor judgement are two major causes of accidents. Add to that the potential of user complacency or over-reliance on the system, and the problems could become worse.

Accepting the systems

Ultimately, drivers' acceptance of and comfort with automated systems are crucial and determine whether they are actually used. Drivers accept a system when they:

- Find it useful;
- Can use the system and are satisfied with it;
- Find the system reliable and trust it;
- A system is further accepted if other road users trust it.

Loss of driving skills

Drivers of fully automated vehicles risk losing basic driving skills when they relegate full control to the vehicle. Partially automated vehicles would mitigate this loss of skills, as driver control is still required. Although drivers will still need to be skilled enough to take control of fully automated vehicles that suffer total system failure, technology that guarantees fail-safe vehicles would negate this.



Advanced monitoring of fatigue among professional drivers: A significant advance in road safety

The regulations: "AETR" driving times and rest periods

Everyone has been struck by it – the lurking menace of "fatigue" that moves in almost unnoticed yet severely impedes safe driving. In fact, falling asleep at the wheel causes up to 20 per cent of crashes on motorways.²⁷ Under UNECE auspices, the 1970 European Agreement concerning the Work of Crews of Vehicles Engaged in International Road Transport ("AETR") calls for the strict regulation of driving times and rest periods for truck, bus and coach drivers. Why is it so important to use special regulations for something so obvious as controlling fatigue? Fatigue can easily be underestimated and, just as drivers may have a good feel for their fitness and ability to get behind the wheel, they likewise may lack true perception about the impact of fatigue on their bodies at any one time. For example, to ensure a level of awareness commensurate with the demands of the road, the driving period of professional drivers cannot exceed 90 hours during any one fortnight.

Enforcement: The digital tachograph

Enforcement efforts have contributed to the digital tachograph's adoption as a crucial answer to this problem. The device offers important benefits and improves the efficiency of processes by:



- Monitoring the driving and rest periods of professional drivers engaged in international transport;
- Recording and storing drivers' activities for 28 days;
- Being highly secure;
- Recording data used by fleet management;
- Conforming to the needs of law enforcement agencies.

The digital tachograph was mandatory from June 2006 in new trucks and coaches in the European Union (EU), and from 2010 for other non-EU Contracting Parties to the AETR.



Examples of VMS from the UNECE ITC Consolidated Resolution on Road Signs and Signals

Variable message signs (VMS)

UNECE is working to further standardize variable message signs, for example with regard to those that either emit light or reflect light. Variable message signs must not only be readable and understandable quickly and under all environmental conditions, but they must also have a "fit for purpose" of at least 10 years. State-of-the-art LED technologies make it possible to achieve this tough requirement.

DID YOU know? **Infants have relatively large and heavy heads**

Did you know that infants and toddlers have, in relation to their bodies, relatively large and heavy heads? That is why this group of "road users" should travel in restraints placed opposite to the driving direction to reduce the risk of severe injuries during hard braking.



Safer vehicles

Goal 7

Make vehicles safer

INTRODUCTION

My car is my body – it better be safe



Many people love to drive. “Route 66”, a legendary road in the United States, traverses much of the country’s varied geography and is celebrated in song. Having a personal attachment to a vehicle means that the analogy of cars to humans is not so far-fetched: cars have frames and people have bones; gasoline powers a vehicle much like liquids help to fuel a person’s body; use of hydrogen cells or electricity to power current and future cars could be likened to the heart’s electrical system that keeps a person “ticking”; and if problems crop up, mechanics make inspections just as doctors provide check-ups. It’s not unusual for people to become “one” with their vehicles in the same way that they have affinities for pets

or significant others. Advertising can partly play a role in the attachment to some vehicles, just as the promotion of safety or quality benefits in others will create a halo of trust. It is evident, at least on an emotional level, that making vehicles safer is important.

Practically speaking, improving vehicle safety contributes to reducing the risk of injury or death in an accident. The human body is “frail” when dealing with the magnified forces of kinetic energy in a crash. Inside a vehicle, a driver and passengers are not only impacted by car surfaces during an accident, but are at significant risk of internal injuries caused by the dramatic movement of their bodies. Advances in “head-up displays” that improve driver reaction and the interpretation of road situations, and child restraint systems that protect the head from movement in collisions, are some of the recent contributions to vehicular safety.

Those charged with improving safety must constantly adapt to a range of developments. Advances in technology and recognition of the various population groups using roads impact how road safety experts must anticipate safety concerns.

Finally, with more open borders and intercontinental trade, and travel extending beyond one’s own country, harmonizing efforts to make vehicles safer is crucial. A car purchased in one country should ideally meet the same safety standards as one purchased in another. Harmonization of technical vehicle requirements on a global scale will provide the benefits of the latest safety technologies to all the different markets worldwide, from low-income economies to middle- and high-income countries.

STATUS AND RESULTS**KEY RESULTS**

Three and four new accessions to the 1958 and 1998 Agreements, respectively

Elaboration of five new Global Technical Regulations since 2011

Addition of nine new United Nations Regulations and more than 300 amendments since 2012

Bringing the existing and new agreements in line with technical progress

Besides feeling free to drive, road users ultimately need to feel safe. Vehicle regulations developed and administered by the World Forum for Harmonization of Vehicle Regulations encompass many of the conceivable safety aspects for vehicles – from crash tests to braking and the quality of seat belts. The World Forum has developed 135 United Nations Regulations on motor vehicle safety that are constantly being updated to reflect technological progress, and has combined them with 16 United Nations GTRs supporting self-certification regimes. Crash protection is of course important; thus, vehicle design also plays an essential role in improving safety.

While the World Forum (ITC WP.29) is a permanent Working Party in the United Nations institutional framework, with a specific mandate and rules of procedure, it works as a true global forum, allowing open discussions on motor vehicle regulations. Any United Nations member State and any regional economic integration organization, set up by country Members of the United Nations, can participate fully in the World Forum's activities and may become a Contracting Party to the Agreements it administers on vehicles. Government organizations and non-governmental organizations may also participate in a consultative capacity in ITC WP.29 or in its subsidiary working groups.

Not only do more than 120 representatives participate at the sessions of the World Forum, but its work is transparent: all agendas, working documents and reports are openly accessible. Vehicle innovations and safety measures are incorporated into the global regulatory framework that UNECE services, namely the 1958, 1997 and 1998 Agreements. The World Forum has created the technical regulations for many industry standards, including airbags, side-impact bars, antilock braking systems, motorcycle helmets, car seat belts, glazing for windcreens and the behaviour of burning vehicles. It is also active in child restraint systems, whiplash injury prevention, frontal/lateral/rear crash protection, safety belts and their anchorages, and protection against electric shocks in electric and hybrid vehicles.



UNECE and vehicle safety

Electronic stability control

Due to UNECE efforts behind ESC through United Nations Regulation No. 13 and No. 13-H, cars and trucks can avoid rollovers, skidding or loss of control. In fact, ESC could lead to a 50 per cent reduction in crashes.

Advanced emergency braking systems

An innovation overseen by UNECE, AEBs employs sensors to detect the proximity of vehicles or other obstacles that are in front of another vehicle on the road, and to detect situations where the relative proximity of vehicles and their speeds could suggest an impending collision. It is also a requirement on all new coaches and heavy transport vehicles since 2013. The European Union uses United Nations Regulation No. 131 on the approval of motor vehicles with regard to the AEBs as the basis for these systems.

Lane departure warning system

UNECE ITC WP.29 adopted Regulation No. 130 that aims to significantly reduce accidents caused by three factors: driver errors, distractions and drowsiness. LDW system warns the driver of an unintentional drift of the vehicle out of its travel lane. The United Nations Regulation was adopted to ensure uniform provisions concerning the approval of motor vehicles with this system, and applies to new coaches and trucks.

Vehicle design

Developing technical provisions that are performance oriented without prescriptions in design are an important role of the World Forum. They need to be applied during construction and cover a wide area, including:

- Fire safety-level improvements for buses and coaches;
- The superstructure of buses and coaches;
- Indirect vision systems (mirrors and camera monitoring) for trucks and buses;
- The safety of glazing materials (for example, tempered glass, laminated glass, wire glass or rigid plastic used in the manufacture of windscreens and other parts).

Quiet road transport vehicles

UNECE ITC WP.29 is working on a new GTR pertaining to quiet road transport vehicles. Vehicles that rely on electric drive trains are reducing air and noise pollution, but pedestrians (especially the visually impaired) and cyclists have difficulty hearing them. Thus, a new GTR for audible vehicle alerting systems is needed to ensure the presence of electric and hybrid vehicles can be detected.

Periodic technical inspections

UNECE ITC WP.29 is active in addressing poor vehicle maintenance, a significant contributor to road traffic crashes. Failure of any of a vehicle's myriad parts, or any working combination of them, can disable a vehicle, or cause or trigger events that lead to an accident. In fact, over 5 per cent of road crashes are caused by such technical defects.²⁸ While the 1997 Agreement on Periodical Technical Inspections currently covers technical inspection of buses and lorries, an extension of its scope to include light vehicles such as cars and small vans is in the pipeline. Although not many governments have acceded to it to date, UNECE sees this as an opportunity to expand the use of inspections.²⁹



A UNECE ITC WP.29 demonstration of sound devices that "silent cars" could be equipped with

DID YOU **know?** Head-up displays create challenges

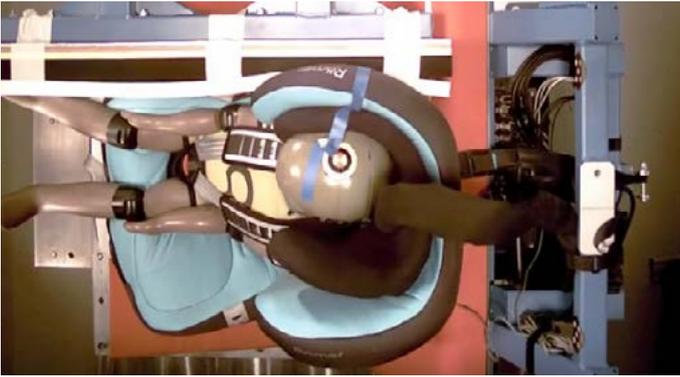


Not having to look down at a dashboard or console for information could reduce driving distraction and help reduce crashes. But detractors of "head-up displays" argue that see-through illuminated graphics appearing on windscreens are actually another distraction for drivers already bombarded with information.³⁰

The display is currently available in some cars and is likely to expand its reach, but drivers often do not know about it. It may just be a matter of time before that changes, as the system has been used widely in airplanes and video games.

Harmonization of the symbols displayed and their location on the screen could be done in the World Forum by amending United Nations Regulation No. 121 on the location and identification of hand controls, tell-tales and indicators.

UNECE and vehicle occupant safety



Child restraints systems conforming to Regulation No. 129 provide solid protection

Strengthened child restraint system requirements: Providing protection from side collisions

In 2012, UNECE ITC WP.29 added an important regulation to the 1958 Agreement – United Nations Regulation No. 129 – to ensure that child restraint systems provide better protection should a car be struck from the side. Lateral containment of a child’s head was found to be crucial for adequate protection and has since become the new requirement for limiting injuries from side impacts.

Protecting occupants and partners

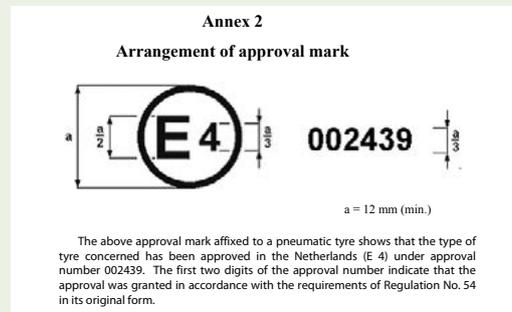
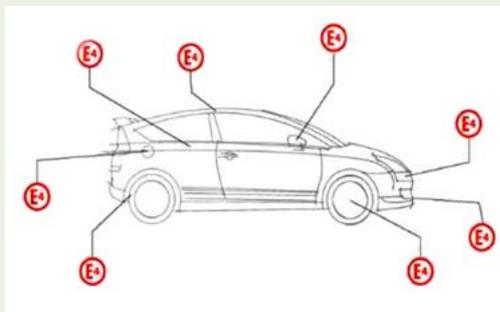
UNECE ITC WP.29 is working to develop amendments to the United Nations Regulation on frontal collision, with particular attention to protecting older and female occupants, and to optimizing vehicles’ structural interaction to improve self-protection and partner protection.

UNECE ITC WP.29 is working to develop amendments

Pole side impact

When a vehicle hits a tree or a pole laterally, the result is usually extensive damage to the vehicle and, in most cases, fatal injuries to the vehicle’s occupants. This lateral part of the vehicle is the weakest point of its structure. To address this passive safety issue, United Nations GTR No. 14 on pole side impact was created and adopted.

DID YOU know? is everywhere and makes vehicles safer



The next time you get into your car and before you buckle up, take a moment to look at your seat belt: you’ll find a capital “E” surrounded by a circle printed on it. Like most people, you might not be aware that the letter signifies that UNECE ITC WP.29 has increased your safety. The “E” means that your seat belt, like any other in cars sold, meets the high safety standards set by UNECE through an international agreement. It also appears on many other items in and on your car, such as the tyres, gas cap, hubcaps, lights, mirrors, child seat (and even its buckle), and also appears on motorcycle helmets. In UNECE parlance, “E” stands for **E**xcellence.

In addition, the “E” signifies that all these parts have been certified to meet the regulations of the 1958 Agreement on the Adoption of Uniform Technical Prescriptions for Wheeled Vehicles, Equipment and Parts. Since 1958, the Agreement has been updated and amended to account for new, innovative technology, as well as research and statistical findings. The 1958 Agreement created a framework ensuring that Contracting Parties follow a common set of technical regulations and recommendations for wheeled vehicle parts and equipment. That means a cheap tin screw can’t be used when a steel one is required. Currently, there are 49 Contracting Parties to the Agreement. The result? All automobiles manufactured or sold in the participating countries must meet a consistent and universally high standard of quality and safety.



Safer vehicles

Goal 8

Improve cargo safety

INTRODUCTION

Safety for big cargo relies on small details



Cargo is generally big, heavy and an additional risk in any road usage situation. That risk is often magnified by the greater impact that cargo can have in an accident.

Thus, cargo merits particular consideration in overall road safety. Many mishaps and incidents in cargo transport are attributed to poor practices in packing cargo transport units, such as inadequately securing cargo, overloading and incorrectly declaring contents. Guidelines

for securing cargo even include detailed instructions that state those responsible for loading should determine the number of anti-slip mats and other securing materials needed, such as pallets and edge protectors.³¹

Accidents involving cargo are of major concern, as the victims may not only be transport and supply chain workers but also ordinary citizens, all of whom have no control over packing cargo units. With shipments moving internationally, safety measures that apply across borders and help to harmonize practices make a difference in ensuring road safety.

STATUS AND RESULTS

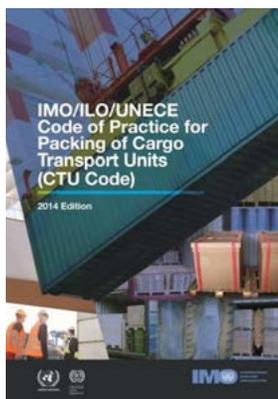
The use of cargo transport units (usually in the form of containers) in national, regional and international trade has grown steadily. Yet, despite the relevant and good examples of packing guidelines, accidents involving poorly secured or overweight containers continue to occur. The UNECE ITC Working Party on Intermodal Transport and Logistics (WP24), in bringing together experts from UNECE member governments and other stakeholders, has provided the key forum for the exchange of technical, legal and policy information, and best practice in combined and intermodal transport at the pan-European level. One of its main tasks over recent years has been to provide best practice information on the safe packing, securing and unpacking of cargo transport units. Ultimately, it seeks to affect transport operations throughout the entire intermodal transport chain, providing guidance on the development of policy and infrastructure in the intermodal transport sector, as well as the workings of and best practice in the logistics sector.

KEY RESULTS

Revised guidelines on safe packing and handling of intermodal transport units

Available in Arabic, Chinese, English, French, Russian and Spanish.

Global Code of Practice: Safe packing and handling of intermodal transport units



UNECE ITC began revision of the guidelines for the packing of cargo in cargo transport units such as containers and other cargo units with the International Maritime Organization and the International Labour Organization with a first revision published in 1997. The latest edition (2014) of the global, non-mandatory Code of Practice for Packing of Cargo Transport Units (CTU Code) provides comprehensive information and references on all aspects of loading and the securing of cargo in containers and other intermodal transport. It takes into account the requirements of all inland transport modes.

The CTU Code applies to transport operations throughout the entire intermodal transport chain and provides guidance not only to those responsible for packing and securing cargo, but also to those who receive and unpack the units. It addresses areas including the checking of cargo on departure and arrival (before dispatching or unpacking the cargo), phytosanitary requirements, training issues and the packing of dangerous goods.

These guidelines are addressed directly to those who pack and unpack cargo, as their actions have a direct impact on one or more of the following groups:

- Road vehicle drivers and other road users when the unit is transported by road;
- Rail workers, and others, when the unit is transported by rail;
- Crew members of inland waterway vessels when the unit is transported on inland waterways;
- Handling staff at terminals when the unit is transferred from one transport mode to another;
- Dock workers when the unit is loaded or unloaded;
- Crew members of a seagoing ship during the transport operation;
- Those who have a statutory duty to inspect cargoes;
- Those who unpack the unit.

Although the guidelines are non-mandatory, their use is spreading globally. They will become a requirement in South Africa from 2016 and are already being used in many countries. The ITC WP.24 will monitor the use of the guidelines to assess their effect on accidents in this field.

DID YOU know? The way people, pets or cargo are transported impacts road safety

Article 30 of the 1968 Convention on Road Traffic stipulates that every load on a vehicle, including on a motorcycle, must be arranged so as to prevent it from impairing the stability or driving of the vehicle.

Animal “cargo” needs to be taken care of, too. Pets such as dogs, for example, should travel in a special crate, but can also wear a harness or stay behind a barrier so that, in case of hard braking, they do not get injured or become deadly projectiles hurting themselves and others.

Did you know that the risk of dying in the front seat during a car crash increases fivefold if passengers in the back do not wear seat belts? That is why it is so important to buckle up – especially in the back seat.



Can you spot who travels safely here?

Improve the safety of transporting dangerous goods

INTRODUCTION

The other dangers of dangerous goods

If road users think dangerous goods are rarely transported on the same roads they travel on, they should think again. Who knew that perfumes and certain household cleaning products are “dangerous goods”? Road transport shoulders much of the burden of goods distribution, and as roads specifically designed for their transport are rare, dangerous goods travel the roads with everyone else.

The situations ring loud and clear: trucks transporting chemicals overturn on highways, not only causing deaths but creating other immediate hazards because of their dangerous cargo. Taking appropriate safety measures in preparing cargo for transport, and properly labelling and marking dangerous materials to help emergency responders act quickly after a mishap, are just some of the precautions used. Clearly the transport of dangerous goods must be regulated to minimize the effects of accidents on people, property, the environment, the means of transport employed or other goods.



Besides instructions for classifying, labelling, documenting and packing, requirements go deeper than most would think. How vehicles are constructed and operated, including their braking systems, speed limiting devices and electrical systems; how the different types of dangerous goods, e.g. explosives are carried; how the protection against fire is assured; and, of course, when and how inspections take place – all are covered.

As with most aspects of road safety, the larger context of the operating environment also plays a role. Poor infrastructure, inadequate road signage, the lack of adequate driver training and driver fatigue can help to trigger a catastrophic event. Moreover, various contradicting regulations in countries for different modes of transport would impede international trade in chemicals and dangerous products, or make it difficult and unsafe. Dangerous goods are also subject to other kinds of regulations, such as those covering work safety, consumer protection, storage and environmental protection.

That is why improving the safety of transporting dangerous goods is an ongoing and important goal in overall road safety. It not only heightens the authorities' awareness of the measures required to properly deal with such cargo, but also protects those charged with moving it and those potentially exposed to it on the road.

STATUS AND RESULTS

KEY RESULTS

Entry into force of amendments to Parts 6, 7, 8 and 9 of the ADR**Signing of several multilateral agreements among Contracting Parties**

More than 50 signatures in 2014 and 2015, allowing advanced application of amendments expected to enter into force in signatory countries in 2017

Ongoing projects and tests of telematics

Occurring in real conditions with the objective of delivering an interoperable system

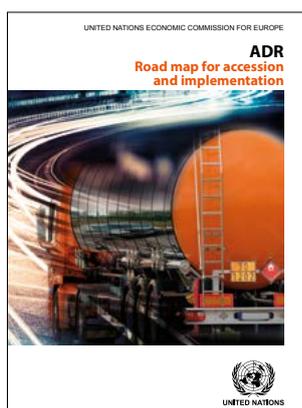
Accidents involving dangerous goods have led to extensive damage, resulted in deaths and generated much discussion, coverage in the media and vows of corrective action. And the risk of such accidents especially in developing countries, remains of high concern as it is related to numerous factors, including industrialization, technological progress, new substances and materials, increases in the number of vehicles and road traffic, poor road infrastructure, the lack of adequate road signs and, importantly, the lack of driver training and the impact of driver fatigue (the lack of legislation or enforcement limiting driving times).

The UNECE-administered European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) has served to address these factors since 1957. The ADR covers the operation of vehicles and their construction (braking systems, speed limiting devices, electrical equipment, protection against fire), as well as vehicle inspections.

The ADR is amended every two years to account for technological progress, individual developments and political concerns, new hazardous material on the market, the availability of new safety techniques (packaging, tanks, vehicles) and lessons drawn from accidents.

UNECE ITC and the Economic and Social Council (ECOSOC) Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals cooperates closely with other organizations, such as International Maritime Organization, the International Civil Aviation Organization, the International Atomic Energy Agency, the Intergovernmental Organization for International Carriage by Rail, and the Central Commission for the Navigation of the Rhine. This ensures that, where appropriate, corresponding amendments are made simultaneously to other legal international instruments governing transport of dangerous goods by other modes of transport, thus avoiding technical barriers to international multimodal transport.

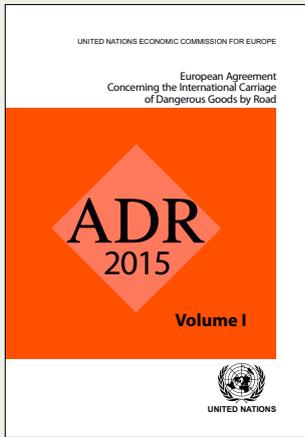
UNECE also administers global United Nations mechanisms intended to harmonize transport of dangerous goods regulations applicable to five key transport modes: air, sea, road, rail and inland waterways. In addition, these mechanisms cover multisectoral harmonization of hazard classification criteria and hazard communication tools (transport, workplace safety, consumer safety and environmental protection).



ADR road map: UNECE guide for accession and implementation

Developed by UNECE and published in 2013, the ADR road map has been used extensively in many UNECE capacity-building and awareness-raising workshops. It outlines the steps to follow to accede to and implement the European Agreement concerning the International Carriage of Dangerous Goods by Road. A European agreement as reflected by its title, it can be applied globally and is open for accession to all United Nations Member States. It recommends that existing national legislation and regulations on the transport of dangerous cargoes be aligned with the ADR.

DID YOU **know?** ADR is one of the best-selling publications in the United Nations



The ADR is also the only international legal instrument that extensively covers all aspects of safety in the transport of dangerous goods by road. It is open for accession to all United Nations member States.

Telematics: Moving away from paper to faster, more efficient transfers of information

ADR Contracting Parties have recently agreed on system architecture for telematics (the transmission of computerized information) in the framework of transporting dangerous goods. Information provided via telematics can enhance the safe and secure transport of dangerous goods, benefiting, among others, consignors, transport operators, emergency responders, enforcers and regulators. Further work is under way to effectively use this architecture to link all relevant entities during any operations of transporting dangerous goods.

Driver and safety adviser training

Drivers

Training requirements as well as examinations are founded in the ADR. Every five years, refreshing training and a new examination are required.

Safety advisers

The ADR requires that each undertaking with activities related to carriage, packing, loading, filling or unloading of dangerous goods include the appointment of one or more safety advisers. These advisers must also be trained and possess a certificate after examination.

Road tunnels: A distinct challenge in transporting dangerous goods

The ADR categorizes the dangerous goods to be regulated in certain types of tunnels, as well as the road signs required to ensure restrictions are implemented. After the tragic fire in the Mont Blanc tunnel in Europe, UNECE ITC also developed a comprehensive catalogue of measures for road tunnels, including 10 measures for road users, 16 for tunnel operation, 11 for infrastructure and 6 for vehicles.



Reporting on incidents and accidents involving dangerous goods

The ADR requires the reporting of all incidents and accidents involving dangerous goods to the competent authorities of the country where the event took place. The UNECE ITC Working Party on Dangerous Goods is developing and testing a new pilot database among Contracting Parties in order to consolidate related information, and is proposing a road map to use such a database for risk management in the context of the inland transport of dangerous goods. In partnership with the European Railway Agency, workshops are taking place to help in harmonizing the approach to risk management for all modes of inland transport through data, models, tools, processes and decision methods.

Requirements for communicating hazards



The ECOSOC Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals defines the marking, labelling and/or placarding of cargo and vehicles, and specifies the documentation needed to inform carriers and emergency responders. Packages/cargo transport units have to bear labels/placards identifying hazards in accordance with the United Nations Recommendations on the Transport of Dangerous Goods, consistently with the United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS) as applicable to the transport sector. Vehicles carrying dangerous goods have to bear, at the rear and the front, an “orange plate” indicating that the cargo is dangerous. When the vehicle is carrying solid cargo in bulk or liquid substance in tanks, the orange plate has to show, at the top, a hazard identification number specifying the hazard or hazards of the cargo, and, at the bottom, the number assigned by the United Nations to this specific cargo. This allows emergency responders to take immediate and efficient first action in the event of an accident.

DID YOU **know?** UNECE helps with quick hazard identification



The orange plate displayed at both the front and the rear of a vehicle informs about the type of hazard and the substance carried. The number 80 in the upper half of the orange plate stands for “corrosive or slightly corrosive substance”, while the number 1789 in the lower half stands for “hydrochloric acid”.



Post-crash response

Goal 10

Mitigate the impact of road crashes

INTRODUCTION

When crossing borders is no holiday



Road accidents are not just traumatizing; they are often confusing for those involved and affect a variety of “players” in their aftermath. Medical post-crash care concerns the immediate response services and medical teams activated to provide rapid treatment for road users, either on-site or after transport to medical facilities. And, those road users not injured must themselves act appropriately, even at the most difficult time at the scene.

Post-crash care can be more profound and lengthy. It can extend to arranging the social safety net for users severely injured or handicapped.

Moreover, families that have lost a member in an accident will often require subsequent psychological and legal assistance.

National systems and programmes, if available, generally function well within their respective jurisdictions. But with today’s level of international travel and transport, addressing post-crash claims, liability and problems across borders can be daunting. The goal of mitigating this process – of creating a mutual recognition of insurance among countries, for example – is central to easing the burden put on both national insurers’ bureaus and the affected road users.

STATUS AND RESULTS

For post-crash situations, various international health bodies, such as the World Health Organization, have the mandate for developing international programmes regarding medical care and the longer-term support and psychological care for affected families, as well as for those victims with resulting disabilities. For its part, UNECE ITC addresses the need to resolve post-crash claims and liabilities. This is a particularly complicated area, but one where UNECE efforts are benefiting users by making the often difficult, puzzling and discouraging procedures following crashes easier for all involved.

KEY RESULTS

Advances in expanding the Green Card System to new countries

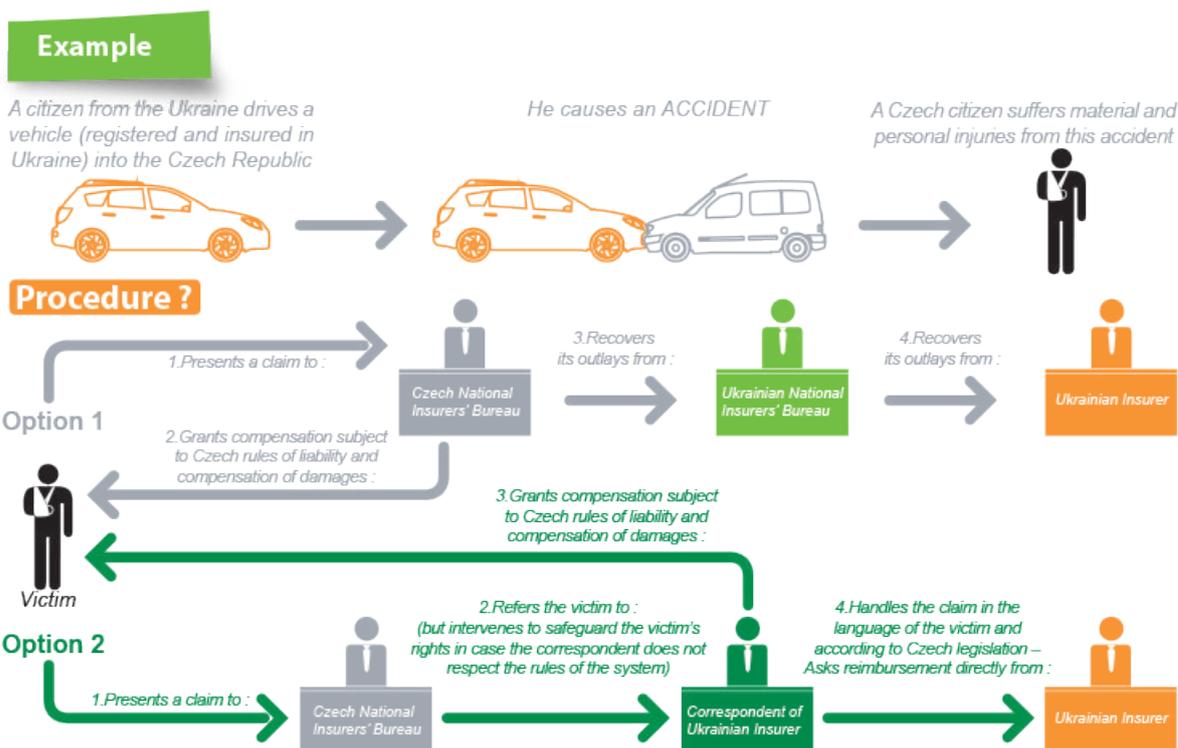
Azerbaijan has joined the system

Advances in adopting a UN Regulation on accident emergency call systems

The Green Card System

Influencing behaviour and protecting vehicle users

UNECE ITC recognized the importance of protecting vehicle users particularly in the context of increasing international travel across borders. With regard to the consequences of accidents precisely under this scenario, third-party liability insurance was determined to be critical in smoothing the inevitable complications and problems that arise from accidents. The Green Card System,³² formally implemented in 1953, was firmly established under UNECE ITC Consolidated Resolution 4 on the Facilitation of International Road Transport. As a protection mechanism for victims of road traffic accidents that occur outside their country or involve foreign drivers in their own localities, the system consists of 47 member countries represented by 46 national insurers.



The Green Card serves as an international certificate of insurance, is accepted by all participating member countries, and certifies that a visiting motorist has at least the minimum compulsory Motor Third Party Liability Insurance cover required by the laws of the countries visited.

The Green Card System established at UNECE is implemented by the Council of Bureaux.

Accident Emergency Call System

Accident Emergency Call Systems may save up to 2,500 lives a year in the European Union. By some estimates, these systems may speed up emergency response times by 40 per cent in urban areas and up to 50 per cent elsewhere. Globally, full interoperability of positioning systems and of mobile telecommunication networks is required. The World Forum for Harmonization of Vehicle Regulations responds to the need for harmonization of technical requirements on the basis of performance-based test provisions and plans to adopt a reg call systems.

DID YOU know? UNECE established the Green Card System

More than 400,000 accidents occur in Europe every year between motorists from different countries of the Green Card System. That's more than 1,000 per day.

Motorists that have an accident in their home country caused by a foreign-registered vehicle can settle their claims via the Green Card System. A motorist's national motor insurer's bureau will settle the claim according to the national legislation. In turn, it will exercise its right of recourse against the insurer of the liable motorist (for more information, consult Council of Bureaux information at www.cobx.org).

The system's two objectives are:

- To expedite border crossings: motorists do not need to take out individual national insurance contracts for each country visited;
- To make claims settlements easier: third-party victims of road traffic accidents do not suffer from the fact that the injuries or damage they sustain were caused by a visiting motorist, rather than by a motorist residing in the same country.





Post-crash response

Goal 11

Learn from road crashes

INTRODUCTION

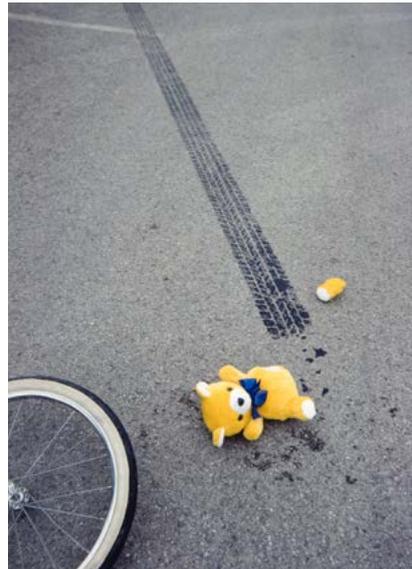
One crash is more than a singular event

While statistics can blind, they are useful for magnifying the importance of each life. The world hears repeatedly that 3,800 people die *each day* on the roads. Often, the cold fact only strikes home when individuals know or are related to a person killed in a road accident.

While one accident may seem like an isolated incident, it can provide valuable information and learnings in a collective pool of road safety knowledge. Furthermore, accident investigation may benefit from a *multidisciplinary* approach – a consideration of not only the immediate results of human error, but also the systems and their role in shaping the context in which vehicle operators make errors.

Multidisciplinary crash investigation (MDCI) looks primarily at preventing accidents or their consequences, and not at assigning blame or liability. Although the valuable data and perspectives from MDCI are related to a specific incident, the potential for the general collection and assimilation of statistical data is enormous, not just for helping users but also in improving systems. With these improvements, the learnings from this data can lead to amendments to international agreements and regulations, or create the basis for new ones.

Learning from all events, together, can help generate solutions for keeping road users safe.



STATUS AND RESULTS

KEY RESULTS

Work on a best practice guidebook on MDCI

Increased comparability of definitions

To further harmonize road safety statistics between countries

Just as UNECE is active in helping countries and regions set ambitious yet realistic road safety targets by analysing statistics, it is also driving and promoting the use of statistics in crash investigation because they help all affected parties. Using MDCI tools is fundamental to identifying the factors that may contribute to road crashes and to marginalizing those factors for improving road safety.

UNECE transport statistics already give details on road traffic accidents for the number of fatalities, casualties and number of injury accidents, with a breakdown by type of road, time of occurrence and type of collision. These are available online and are updated on a regular basis. Moreover, the periodic *Statistics of Road Traffic Accidents in Europe and North America* is a long-standing publication that is helping government services and officials analyse accidents and their patterns for planning improvements in road traffic safety. The UNECE ITC Working Party on Statistics (WP.6) deals with the development of appropriate methodologies and terminology for the harmonization of statistics, as well as the collection of data from member States and the dissemination of these data.

UNECE statistics: Collected and updated yearly across a range of accident barometers

UNECE provides a number of indicators showing the road safety situation in the UNECE countries. Among the indicators are: number of fatalities and number of injuries both per inhabitants and passenger cars, severity of road traffic accidents and the distribution of killed/injured by road users.



Multidisciplinary crash investigation

Traffic safety professionals are increasingly aware that a multidimensional systems approach is required today to effectively address road safety issues. Instead of focusing on one element of traffic safety in isolation (engineering, enforcement or education), building bridges and relationships between all the elements that influence road safety is required, as well as understanding how the various elements affect each other at all times. The UNECE ITC Working Party on Road Traffic Safety exchanges good practice on multidisciplinary crash investigation, with the aim to make it common practice.

Safe Future Inland Transport Systems (SafeFITS)

UNECE works on the "SafeFITS" tool that will assist decision makers to apply road safety policies that would work effectively in a national context. The tool will use a model based on historical data and relations between several road safety variables, and is expected to illustrate the results of different scenarios for selected policies and measures.

Targets set for reducing road traffic casualties

Targets are a vital part of a national strategy and plan. UNECE helps in setting them, with the objective of reducing injuries and deaths from road accidents. A road accident database on a national level provides the tool for monitoring and measuring progress over time. Under the Special Programme for the Economies of Central Asia (SPECA), the SPECA Project Working Group on Transport and Border Crossing is monitoring progress against targets and road safety data availability. The results? Four of seven SPECA countries have published road safety data.

THE UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE CARES: LOOKING AHEAD



Overcoming hurdles

“Traffic deaths up sharply in the United States in first six months of 2015”³³

This most recent development in the United States is sobering despite the fact that the positive impact of safety measures there appears to be growing: deaths over the past decades from crashes involving drink-driving have dropped from about 50 per cent of fatalities to about 30 per cent. Deaths among teen road users are also down, and seat belt use is up. What’s more, cars have more safety technology than ever before.³⁴

But as these recent results may indicate in broader terms, the push for safety in all countries needs to continue at full force because of the wealth of factors working against it. In developing countries, drivers sometimes don’t use the latest safety technology or don’t know how to use it. With any economic upswing, higher employment can result in more people using roads and potentially more accidents and deaths occurring. Lower costs for fuel resulting from the drop in oil prices could increase the propensity to drive and the number of kilometres driven; and distractions caused by using mobile phones when driving can lead to accidents.

Continuing the commitment: UNECE highlights six areas of positive impact on the road to 2020 and beyond

Improving road safety governance

Ultimately, road safety laws and enforcement are a domestic matter. Besides the countries in the UNECE region that align their laws and regulations with the international conventions and agreements, more countries outside the region would benefit significantly from implementing and enforcing the United Nations legal instruments and participating actively in activities helping to build their capacities for road safety. Once the time is right, accession to the conventions and agreements will follow.



Advancing the international legal framework where it is lacking

Some gaps in international legislation affect important groups and topic areas. The safety of pedestrians and cyclists, the use of motorcycle helmets, drink-driving, technical policy and technological capabilities all need more concerted attention to “get them right”.

For example, the 1968 Convention on Road Traffic does not cover the “domestic” use of helmets for motorcyclists other than stipulating that Contracting Parties may refuse to admit to their territories in international traffic motorcycles with trailers and motorcycles whose drivers and passengers are not equipped with protective helmets.

Increasing the modal shift from private vehicle to public transport

Road safety policies aim particularly at reducing the likelihood of road crashes by improving road infrastructure, educating road users, and reducing the severity of crashes by improving vehicle technology. While these are significant actions, a focus on promoting safer modes and reducing exposure through the use of public transport is equally important. Therefore, promoting the modal shift from private vehicle to public transport can be a critical step towards better road safety. This can only occur, however, when good public transport infrastructure and safe rolling stock are provided.

Governments and local authorities need to engage in developing policies to create appropriate infrastructure and encouraging the use of public transport. The time is right to help them in developing holistic transport strategies incorporating a modal split, which also has positive effects on decreasing traffic congestion and environmental pressure from transport while contributing to improved human health.



On the road to 2020: Special Envoy for Road Safety appointed

To drive concerted efforts to meet United Nations road safety goals, the Secretary-General appointed Jean Todt, President, Fédération Internationale de l'Automobile, as his Special Envoy for Road Safety. In this role, Mr. Todt will seek ongoing political engagement on global road safety. He aims to raise awareness of the United Nation's legal instruments on road safety and to disseminate best practices in this area by participating in global and regional conferences. He also seeks to generate adequate funding for advocacy efforts through strategic partnerships between the public, private and non-governmental sectors.

Increasing a modal shift for freight transport

Removing goods from the roads and putting them onto other modes of transport can also improve road safety. Fewer cargo trips by road reduces the risks created by heavy-goods vehicles on the road, including the risk arising from inappropriately loaded cargo.

Governments need to be helped with designing policies encouraging the use of intermodal transport and developing solutions for incentivizing it. A number of governments across the UNECE region actively pursue initiatives aimed at encouraging a modal shift in freight and the use of intermodal transport. These include subsidizing services that take heavy-goods vehicles off the road (and onto railways) and providing grants for the construction of intermodal freight terminals and rail rolling stock aimed at new freight services.

UNECE works with member States on monitoring their actions aimed at incentivizing the use of intermodal transport. Information about these actions is shared by member States through an online database available on the UNECE website. The time is right to further intensify actions for increasing the modal shift for freight transport.

On the road to creating national strategies and plans

A number of countries have achieved steady declines in road traffic death rates via coordinated, multisectoral responses through national plans. Focusing on pragmatic approaches to getting programmes off the ground may also help crystalize regional and country-level strategies and plans. A review by the United Nations Economic Commission for Africa on the status of efforts across the continent to implement the recommendations of the United Nations Global Plan for the Decade of Action for Road Safety found widely divergent performance. This included, in particular, a lack of capacity among institutions to deal with the continent's road traffic injury problems. Carrying out the Global Plan has yielded varying results, with some countries performing well on some pillars but poorly on others. While around 40 per cent of countries are implementing more road safety management activities, over 30 per cent have not taken significant action to harmonize data formats and use international standards in reporting.³⁶

At the same time, as low- and middle-income countries often lack the necessary expertise to prepare effective national strategies and plans for road safety, they could be assisted with this preparation or in improving such strategies and plans by conducting a road safety performance audit. Such an audit should formulate a range of tailor-made recommendations on actions to be taken for establishing or improving a road safety management system within a country. The audit should also lead to capacity-building activities that provide training, in particular for government actors involved in the recommended actions.



Mr. Stephen Karingi (top) and Mr. Robert Tama Lisinge, UNECA, at the regional workshop in Addis Ababa

Engaging the Special Envoy for Road Safety

With rapidly rising motorization rates around the world corresponding to economic growth, especially in low- and middle-income countries, it is timely and imperative for all countries to make tangible progress in improving the safety of their roads. The United Nations Secretary-General has appointed Mr. Jean Todt as his Special Envoy for Road Safety³⁷ to advocate around the world for road safety and to put it high on the agenda of every government. The UNECE secretariat is charged with providing secretariat services to the Special Envoy for Road Safety.

The Special Envoy for Road Safety has focused his efforts to help mobilize sustained political commitment towards making road safety a priority. He has advocated and raised awareness for United Nations road safety legal instruments, of which UNECE is the custodian, and in particular for the 1968 Conventions on Road Traffic and on Road Signs and Signals, as well as the 1958, 1997 and 1998 Vehicle Regulations Agreements. Further, he has promoted road safety good practices and helped to generate adequate funding for advocacy efforts through strategic partnerships between the public, private and non-governmental sectors. The time is right to cooperate with the Special Envoy to enhance global road safety.

“The simple fact is that the figures for road deaths are increasing, and as the Decade of Action reaches its midpoint we are in danger of missing the ambitious targets we have set to halt this pandemic.”

Jean Todt, President of FLA and the United Nations Secretary-General's Special Envoy for Road Safety, in “Tackling the Invisible Pandemic on Our Roads”, The World Post, 22 September 2015



From left to right: Ms. Michelle Yeoh, Mr. Jean Todt, Mr. Ban Ki-moon and Mr. Christian Friis Bach

Open letter from Mr. Jean Todt, United Nations Secretary-General's Special Envoy for Road Safety

I am sincerely committed to working constructively and inclusively with all stakeholders, to the benefit of all road users, in an effort to generate additional, stronger momentum and ensure the needed support to address the horrific consequences that road crashes continue to have on the lives of so many around the world today.

In my capacity as a Special Envoy I will convey the key messages that will be developed under the auspices of the United Nations and, hopefully, with a contribution from all stakeholders in the road safety community. In this way I wish to contribute to the work of the many highly dedicated practitioners who have relentlessly been working over years to deliver solutions to improve global road safety. I am convinced that a change in the enabling environment is possible, but for this the road safety issue must be brought to the forefront of the development agenda of world leaders.

As a starting point, I welcome that road safety is explicitly reflected in the proposed United Nations Sustainable Development Goals which are to be agreed at the forthcoming UN General Assembly in September this year. I am committed to working decisively towards ensuring that this target remains in the final document and will spare no efforts to ensure it is achieved.

It will be imperative that the Second Global High-Level Conference on Road Safety, which will take place later this year in Brazil, achieves agreement on clear and measurable outcomes. To this end, I am committed to generate strong and unified support by the entire road safety community and all others who are concerned about road safety, to ensure that governments agree on specific measures to tackle this challenge.

My tasks agreed with the Secretary-General are to help mobilize sustained political commitment for road safety; to advocate and raise awareness about the United Nations road safety legal instruments; and to support sharing of good practices through participation in relevant global and regional conferences. I have also been asked to generate funding, possibly through a UN Road Safety Fund and the building of strategic partnerships between the public, private and non-governmental sectors, and the United Nations. In the coming months, I will launch a new initiative to meet this goal with the backing of political and business leaders.

I very much look forward to working in a positive and constructive atmosphere together with you in order to jointly confront this global crisis. I believe we need a strong and united road safety coalition to generate and maintain strong momentum both towards reaching the goals of the UN Decade of Action for Road Safety and doing so in a sustainable way looking at the horizon of 2030. In this spirit, the world I want is one without road fatalities and injuries and for that we must achieve a drastic reduction of road crashes.

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Together with UNECE on the road to safety



1.25 million fatalities
50 million injured

- 1968 Convention on Road Traffic
- 1968 Convention on Road Signs and Signals
- 1975 European Agreement on Main International Traffic Arteries (AGR)
- 1970 European Agreement concerning the Work of Crews of Vehicles Engaged in International Road Transport (AETR)
- 1958 Agreement concerning the Adoption of Uniform Technical Prescriptions 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 Prescriptions
- 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 (ADR)

2020

2 million lives saved
80 million injuries prevented

Information Service
United Nations Economic Commission for Europe

Palais des Nations
CH - 1211 Geneva 10, Switzerland
Telephone: +41(0)22 917 44 44
Fax: +41(0)22 917 05 05
E-mail: info.ece@unece.org
Website: <http://www.unece.org>

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