



1998 Agreement on Global Technical Regulations (GTRs)

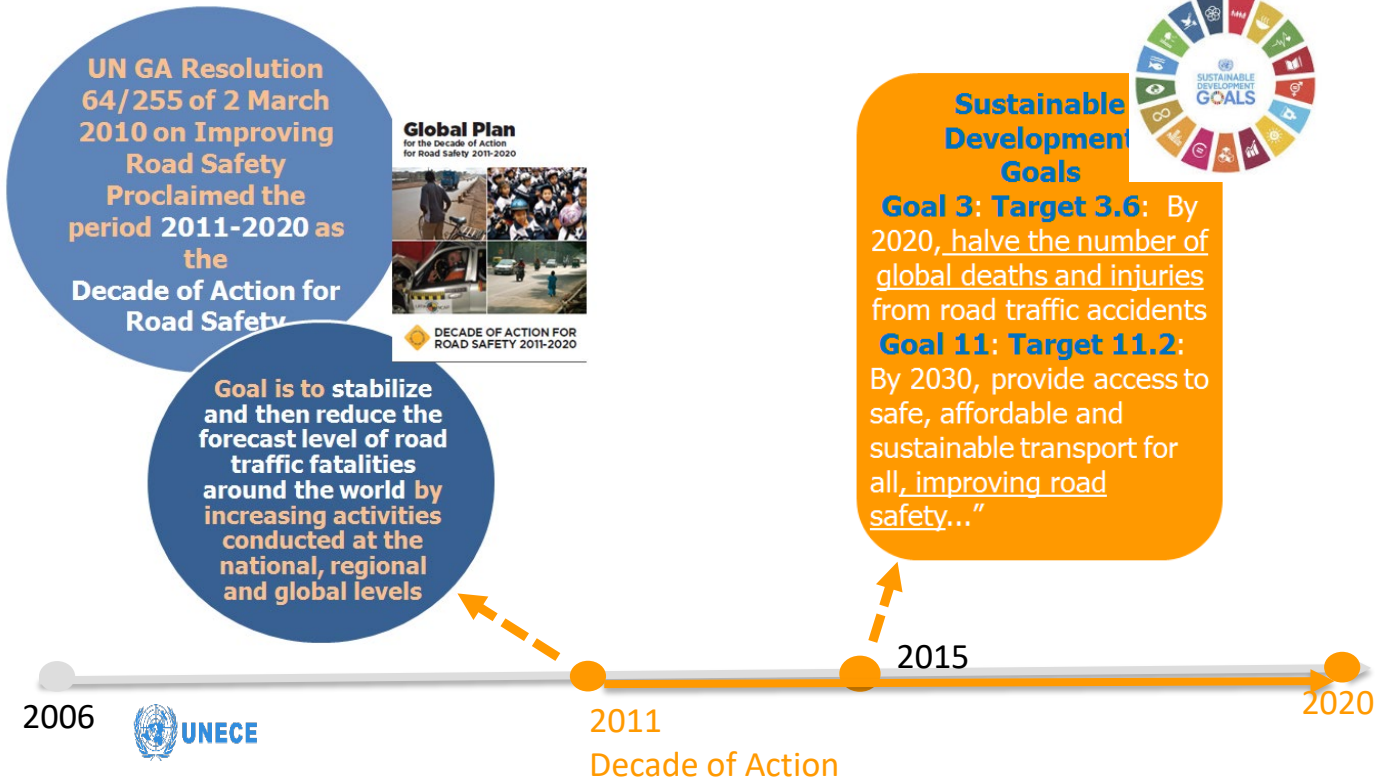
World Forum for Harmonization of Vehicle Regulations (WP.29)

Edoardo Gianotti: Secretary of the Working Party on Passive Safety (GRSP)
and Staff Member of the World Forum for Harmonization of Vehicle
Regulations

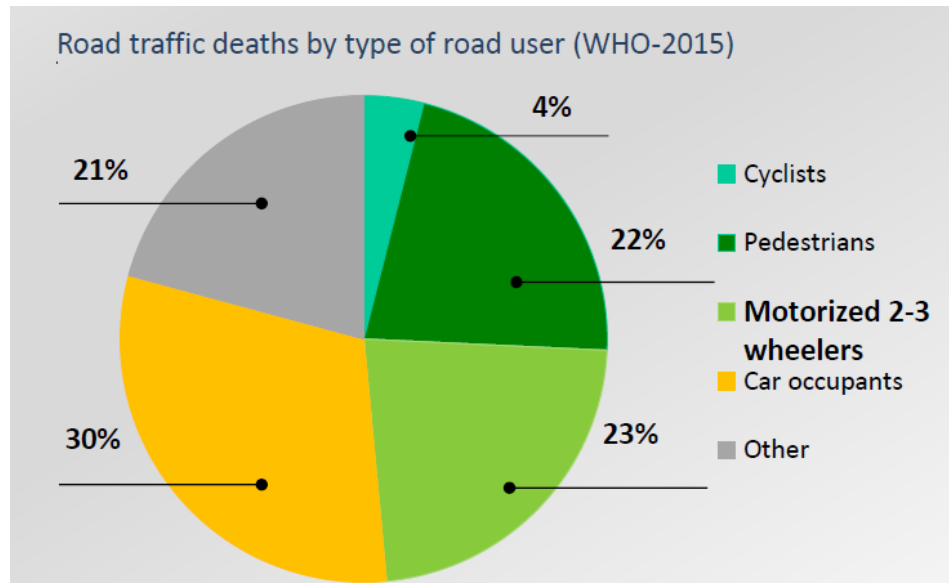
Geneva, 11 November 2019

Road Safety Goals and Targets

Global Mandate



Background on Road Safety



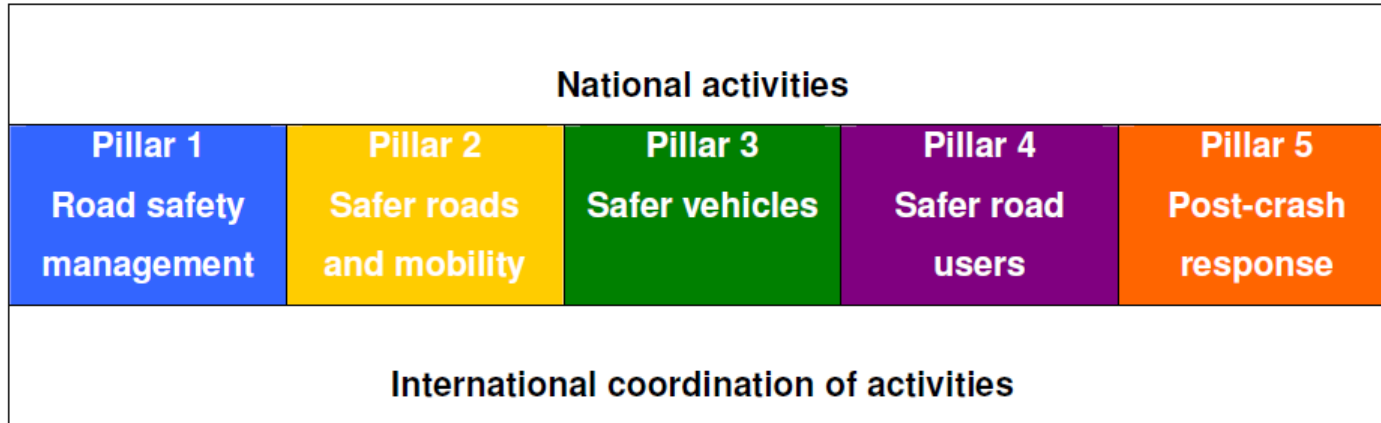
❑ 1.25 million people died in road traffic crashes

❑ 287.500 people died in motorized 2-3 wheelers crashes (23%)

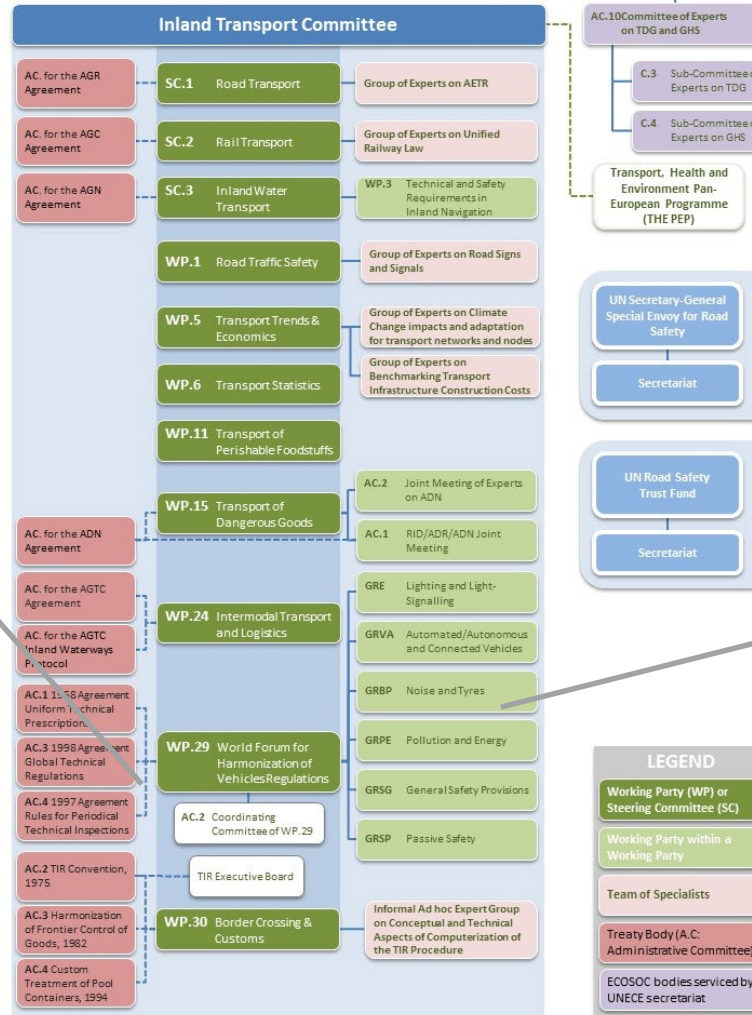
❑ According to WHO, road fatality will become 5th leading cause of death with an increase of deaths up to 2.3 million by 2030

Latest achievements of ITC (parent body of WP.29)





Economic and Social Council



INLAND TRANSPORT COMMITTEE

WP.29 World Forum for Harmonization of Vehicles Regulations

November 19, 2019

GRSP Passive Safety

LEGEND

- Working Party (WP) or Steering Committee (SC)
- Working Party within a Working Party
- Team of Specialists
- Treaty Body (A.C. Administrative Committee)
- ECOSOC bodies serviced by UNECE secretariat

The ITC strategy

Vision:

ITC is the UN platform for inland transport to help efficiently address global and regional needs in inland transport

Strategic objectives:

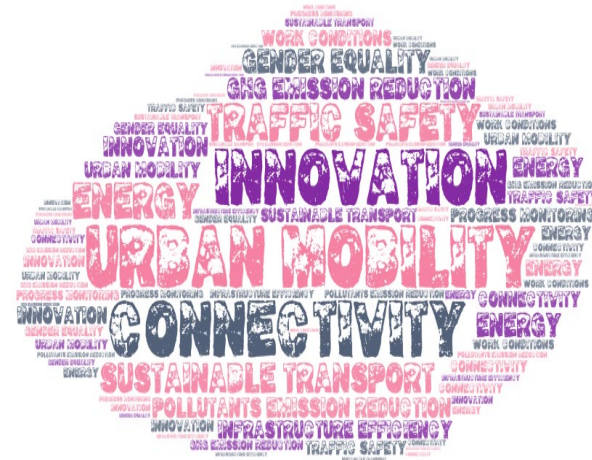
ITC is the UN platform with equal participation of all contracting parties to lead the future development of inland transport

UN transport conventions are universally accepted and implemented, open for accession/ratification by all UN Member States if feasible, and inclusive of regional good practices



ITC keeps pace with technological developments in a timely manner

ITC's work enhances regional and inter-regional connectivity



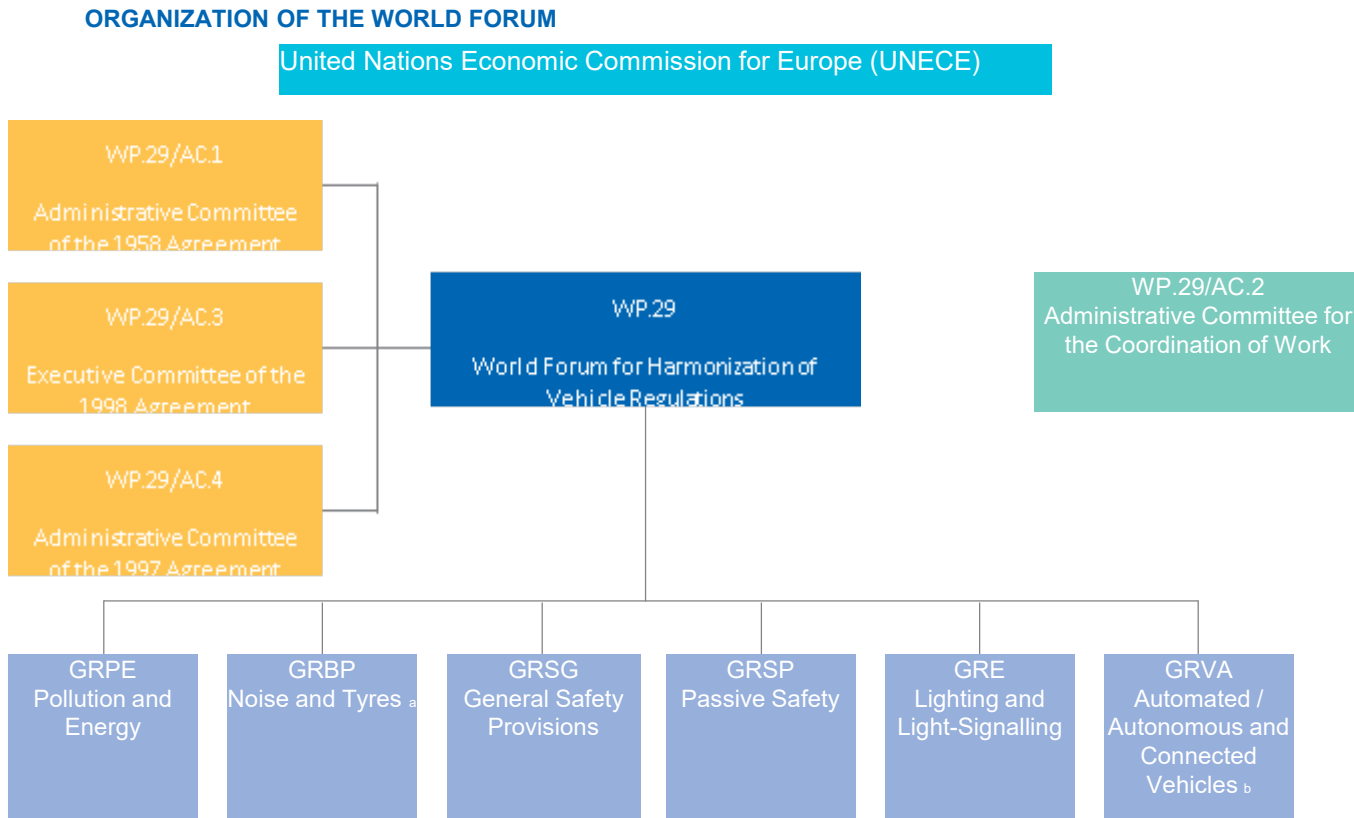
Global Framework Plan of Action for Road Safety

➔ Includes Safe vehicles

Pillar \ Area	Legislation	Enforcement	Education	Technology	International Regulatory Support
Road safety management					
Safe user	Traffic rules drivers pedestrians	Lawful behavior ensured by police and inspectors	Awareness raising, training and examination	Supportive technology and equipment, rules reminders	UN RS legal instruments and resolutions, WP.1, SC.1, WP.15
Safe vehicle	Rules and standards for admission of vehicles to traffic	Certification and inspections by qualified inspectors	Awareness raising for users, training for inspectors	Supportive technology and equipment, compliance reminders	UN RS legal instruments and resolutions, WP.1, WP.29
Safe road	Standards for design, construction, maintenance and signage	Audit and inspection by qualified inspectors	Awareness raising for users, training for inspectors	Forgiving road design, intelligent road systems	UN RS legal instruments and resolutions, int. standards WP.1, SC.1
Effective post-crash response	Standards for post-crash response and for crash investigation	Oversight of rescue services, investigators investigating crashes	First aid and rescue service training, investigators training	Supportive technology and equipment	Consolidated resolution, int. standards, WP.1, SC.1

- Stems from the Global Plan for the Decade of Action for Road Safety:
 - five pillars for road safety as the essential blocks for creating sound national road safety systems
 - safe system approach
- Is specific on (interconnected) actions across areas to be taken by different actors

The WP.29 structure



a Decision by WP.29 at the November 2018 session.
 b Former Working Party on Brakes and Running Gear

> 40 non-permanent technical groups

The World Forum for Harmonization of Vehicle Regulations (WP.29)

- UNECE Sustainable Transport Division: secretariat to WP.29 for more than 50 years
- WP.29 is:
 - the unique worldwide regulatory forum for the automotive sector
 - administrating three Multilateral UN Agreements



Construction regulations

1958 Agreement – Type Approval Regulations with mutual recognition of the type approvals

1998 Agreement – Global Technical Regulations



In Use PTI regulations

1997 Agreement – Adoption of Uniform Conditions for Periodical Technical Inspections of Wheeled Vehicles and the Reciprocal Recognition of Such Inspection

Voluntary Global Performance Targets directly linked to UN legal instruments


TARGET 2 2030 

Target 2: By 2030, all countries accede to one or more of the core road safety-related UN legal instruments.




TARGET 5 2030 


Target 5: By 2030, 100% of new (defined as produced, sold or imported) and used vehicles meet high quality safety standards, such as the recommended priority UN Regulations, Global Technical Regulations, or equivalent recognized national performance requirements.

TARGET 6 2030 


Target 6: By 2030, halve the proportion of vehicles travelling over the posted speed limit and achieve a reduction in speed-related injuries and fatalities.

TARGET 7 2030 

Target 7: By 2030, increase the proportion of motorcycle riders correctly using standard helmets to close to 100%.

TARGET 8 2030 

Target 8: By 2030, increase the proportion of motor vehicle occupants using safety belts or standard child restraint systems to close to 100%.

TARGET 9 2030 

Target 9: By 2030, halve the number of road traffic injuries and fatalities related to drivers using alcohol, and/or achieve a reduction in those related to other psychoactive substances.

TARGET 10 2030 

Target 10: By 2030, all countries have national laws to restrict or prohibit the use of mobile phones while driving.

TARGET 11 2030 

Target 11: By 2030, all countries to enact regulation for driving time and rest periods for professional drivers, and/or accede to international/regional regulation in this area.

“Vehicle Regulations” Agreements

- Safer and more environmentally friendly vehicles
- International road traffic facilitation
- Domestic traffic safety

... through implementation of UN Vehicle Agreements

- ✓ Vehicle approval: 1958 Agreement
- ✓ Vehicle certification: 1998 Agreement
- ✓ Periodic technical inspections: 1997 Agreement



“Vehicle Regulations” Agreements



Emissions of pollutants and CO₂



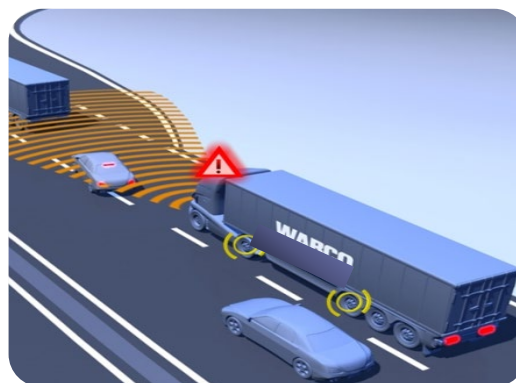
General safety



Passive safety



Noise



Active safety
Automation and connectivity



Lighting and light signalling

Harmonization



The main objective of harmonisation is to "test the vehicle once and sell it everywhere, while maintaining the highest level of safety and respect for the environment".

1998 Agreement (1)

Requirements:

- ❑ Compendium of candidates to be global technical regulations (UN GTRs)
- ❑ GTRs are developed at the highest level of existing standards
- ❑ GTRs can specify lower levels of requirements as an alternative for developing economies
- ❑ They are adopted unanimously by its Executive Committee (AC.3) of WP.29
- ❑ Global Registry as repository of UN GTRs
- ❑ Obligation to initiate the transposition procedure into national or regional legislation
- ❑ A Contracting Party may decide not to transpose the UN GTR or transpose it with modifications

1998 Agreement (2)

GTRs include:

- Technical requirements, test methods, requirements to be met, and limit values
- No administrative requirements:
- No certification procedures
- Does not have mutual recognition system
- No conformity of production procedures
- UN GTRs and UN Regulations tend to have the same requirements

Core obligations of the **1998** Agreement

Contracting Parties to the **1998** Agreement

Commit themselves to implement a GTR into national legislation, when voting in favour

Since the Agreement fosters self-certification it is advisable the establishment of an agency to check vehicle compliance delivered in the market

The **1998** Agreement requests

Annual reporting by Contracting Parties on the implementation of GTRs in their national law

Transposition of Regulations and GTRs (1)

1998 Agreement UN GTRs

- Once voted (unanimity) the UN GTR is registered in the Global Register
- PCs are obliged to start the transposition process
- Annual reports to the secretariat on the transposition process
 - Final report on transposition
 - The UN GTR may not be transposed
- Changes can be incorporated into the transposition process as a national standard
- The CPs of the two Agreements decide to transpose them by means of a corresponding amendment to the equivalent UN Regulation (Parallel Agreements) or establish a new UN Regulation.

Certification of a vehicle with UN GTRs (1) **UNECE**

- UN GTRs can be used either:
 - within the framework of a National Type Approval system
 - within the framework of a self-certified system
- 1998 Agreement has not completed the whole set of GTRs covering the minimum safety requirements or environmental performances of the vehicle
- Other standards may be used to cover areas missing of whole vehicle certification for example the **FMVSS standards or other well-established requirements considered as equivalent.**

Certification of a vehicle with UN GTRs

(2) – E.G. FMVSS

- Both the U.S. regulatory regime and the 1958 Agreement have been developing safety and environmental regulations for more than 40 years.
- Both systems use technical evaluation of real-world data as the basis for regulatory development.
- Both sets of standards cover active and passive safety, along with control of emissions into the environment, resulting in cutting-edge technologies to meet required performance levels.
- **A large part of the FMVSS are listed in the 1998 Agreement's compendium of candidates for the development of future GTRs (no other country has pursued similar action).** This means that if an activity to develop an GTR is initiated in the future, the corresponding FMVSS will be the basis for that GTR.

Certification of a whole vehicle(3)

- Data is generated to ensure that a product meets or exceeds the technical performance requirements of any regulation. A Blue Ribbon certificate confirms the manufacturer's declaration of compliance with safety standards. The EPA already provides an emissions compliance certificate:



**U.S. Department of Transportation
National Highway Traffic Safety Administration**

CERTIFICATE OF AUTHENTICITY

I HEREBY CERTIFY that the enclosed is a copy of the NHTSA statement
concerning the 2014 model year Navigator, Inc.
vehicles for export to Israel

electronically accessed by National Highway Traffic Safety Administration, in my custody.

Signed and dated at Washington, D.C.
this 25 day of February, 20 14
by Martin Kowalek

Policy Analyst, International Policy Department

I HEREBY CERTIFY that Martin Kowalek who signed the foregoing certificate, is now, and was, at the time of signing,
Policy Analyst, NHTSA-135, National Highway Traffic Safety Administration and official custodian of the
record, and that for faith and credit should be given neither certificate as such.


IN WITNESS WHEREOF, I have hereunto subscribed my name,
and about the seal of the Department of Transportation to be
affixed this 25 day of February
two thousand and fourteen

For the SECRETARY OF TRANSPORTATION
Carly Simon
Records Officer

113 Form 1264 (5-01) 28536-1034

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF TRANSPORTATION AND AIR QUALITY
WASHINGTON, DC 20460**

**CERTIFICATE OF CONFORMITY
2016 MODEL YEAR**

Manufacturer: CUMMINS INC.	
Engine Family: GCEXH0408BAP Certificate Number: CEX-ONHWY-16-12 Intended Service Class: MOHDD Fuel Type: DIESEL FELs: NMHC +NOx: N/A NOx: N/A PM: N/A	Greenhouse Gas Info. Primary Intended Service Class: TRACTOR/VOCACTIONAL Primary Test Configuration FTP (if applicable): CO, FCL value (g/hp-hr) 564 CO, FEL value (g/hp-hr) 581 N ₂ O FEL value (g/hp-hr) 0.10 CH ₄ FEL value (g/hp-hr) 0.10 Primary Test Configuration Ramped-modal (if applicable): CO, FCL value (g/hp-hr) 494 CO, FEL value (g/hp-hr) 509
Effective Date: 11/18/2015 Date Issued: 11/18/2015	 Byron J. Bunker, Director Compliance Division Office of Transportation and Air Quality

Pursuant to Section 206 of the Clean Air Act (42 U.S.C. section 7525), 40 CFR Part 86, and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which represent the following motor vehicle engines, by engine family, and is subject to the terms and conditions prescribed in those provisions.

This certificate of conformity covers only those new motor vehicle engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Part 86 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Part 86.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 86.096-7, 86.606, and 86.1006 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR Part 86. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void ab initio for other reasons specified in 40 CFR Part 86.

This certificate does not cover engines sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.

1958 Agreement vs. 1998 Agreement:

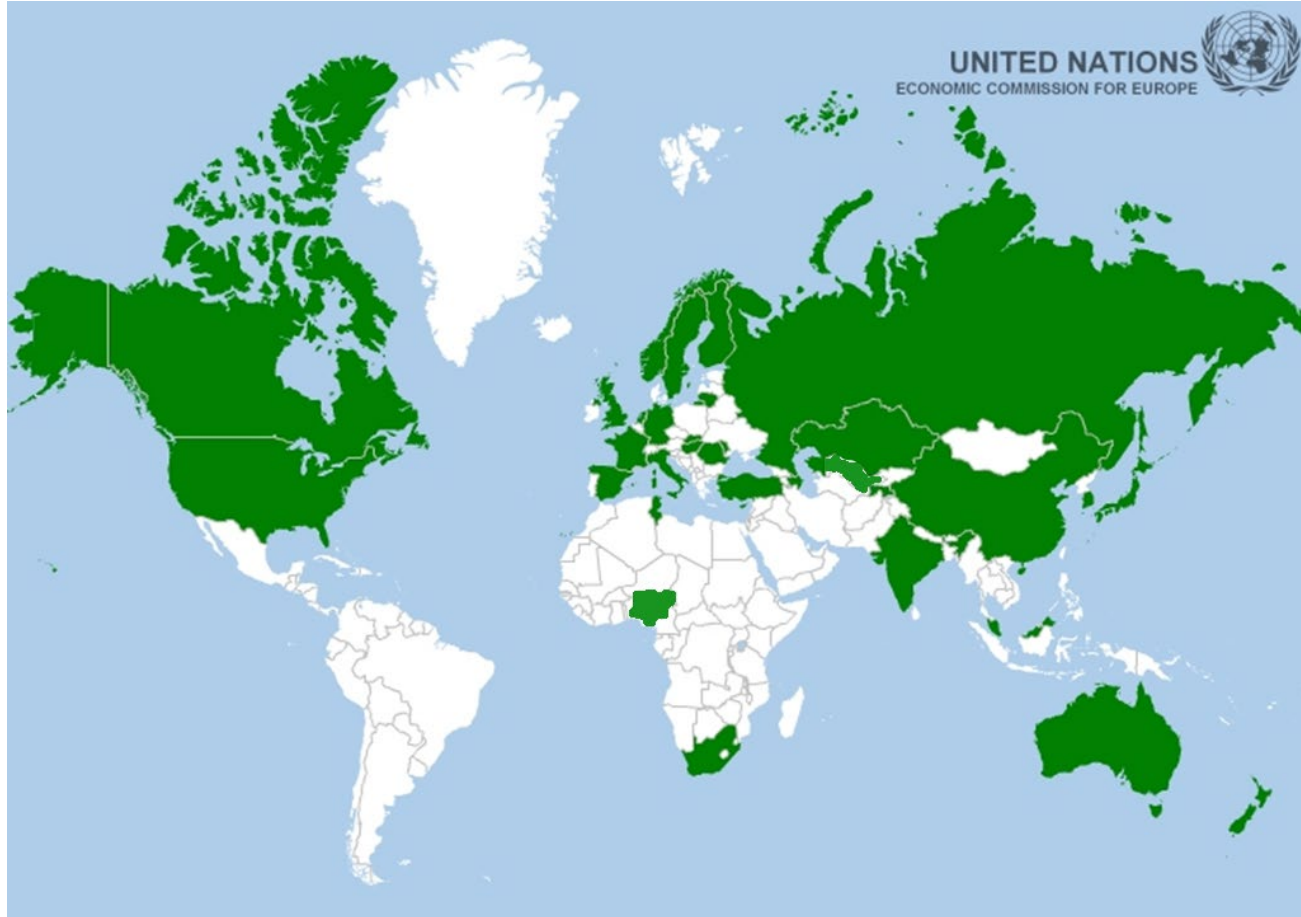
	International standards (e.g. ISO)	UN GTRs ('98 Agreement)	UN Regulations ('58 Agreement)	National / regional legislations (e.g. EU Directives)
Test method	technical provisions	technical provisions	technical provisions	transposition procedure (reproduce in total or refer to the provisions of UN Regulation, UN GTRs or international standards)
Performance requirements	-	limit values	limit values	
Administrative procedures	-	-	certification and COP procedures + mutual recognition	
Transposition	-	Changes are admitted	No changes permitted	-
Application	optional	(optional)	(optional)	mandatory

Executive Committee of the 1998 Agreement

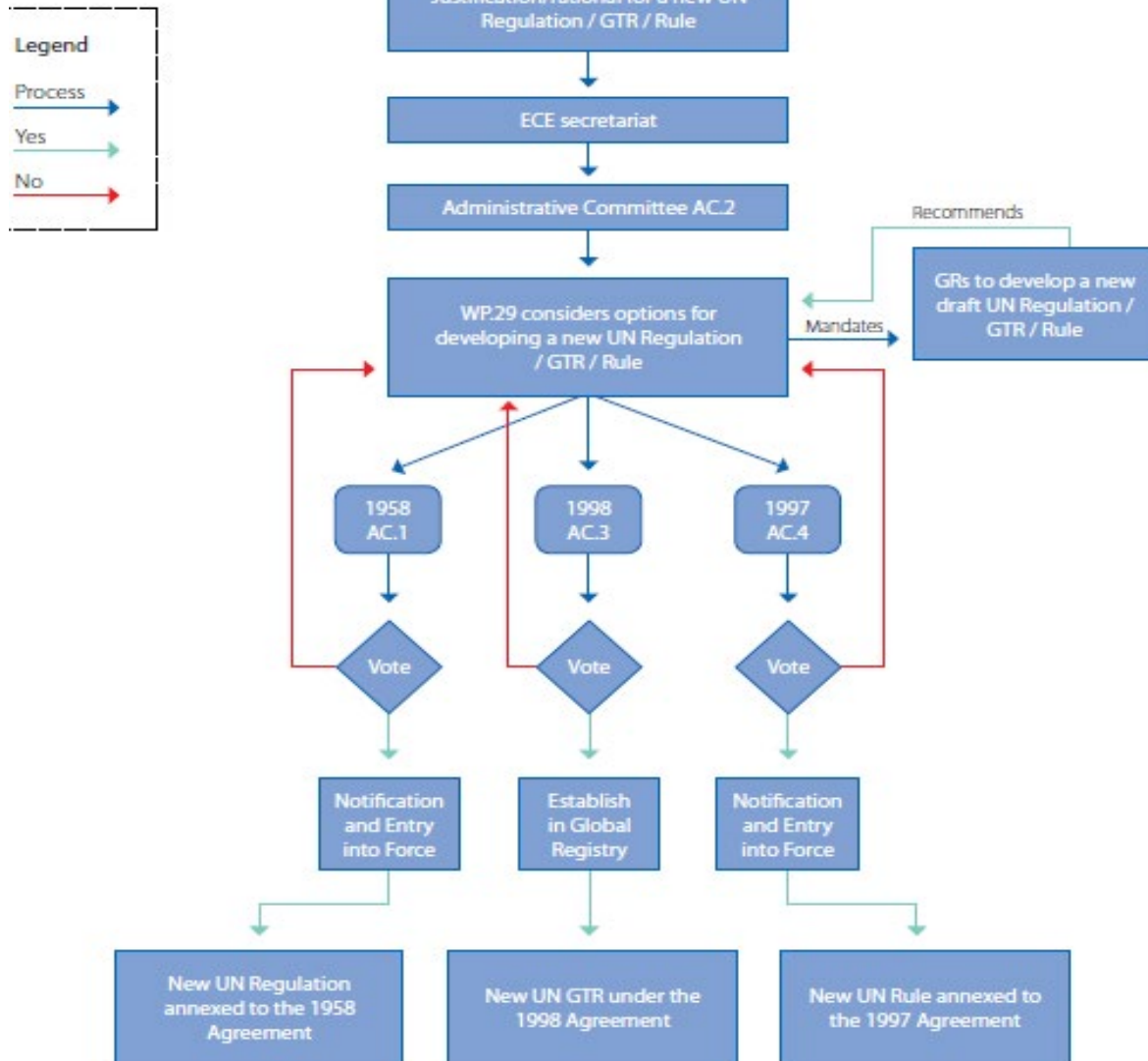
AC.3

- The Executive Committee of the 1998 Agreement (AC.3) is composed of all the Contracting Parties to the Agreement. AC.3 oversees the process of recommending, developing and amending UN GTRs and adopts the new UN GTRs or new amendments once developed.
- The Agreement explicitly recognizes the importance of continuously improving and seeking high levels of safety and environmental protection, and the right of national and subnational authorities to adopt and maintain technical regulations that are more stringently protective of health and the environment than those established at the global level. (Preamble)
- The Agreement explicitly states that one of its purposes is to ensure that actions under the Agreement do not lead to, or result in, a lowering of safety and environmental protection within the jurisdiction of the Contracting Parties, or in the subnational level.
- AC.3 include all the main countries of World producing road vehicles

Contracting Parties to the 1998 Agreement - 38 CPs



Consideration and Establishment of UN Regulations, UN GTRs and UN Rules



Advantages of accessing the Agreement(1)

In June 2016 the Executive Committee of the 1998 Agreement adopted Special Resolution number 2 (SR2) to improve the GTR development process and reaffirm two fundamental main purposes of the Agreement:

- Facilitate the development and establishment of global technical regulations (gtrs) that can serve as a basis for establishing harmonized national regulations that allow for high levels of vehicle safety, theft prevention, environmental protection and energy efficiency.
- Promote the harmonization of existing technical regulations. In addition to preserving and even increasing consumer protection, harmonization through the Agreement can also provide economic benefits by reducing regulatory compliance costs and certification redundancy.

Advantages of accessing the Agreement (2)

- All contracting parties count as one vote in the vote: Both US. as the EU, as a single block (one vote), are contracting parties to the 98 Agreement.
- Therefore, even small countries (for example, S. Marino) have the same electoral weight as the United States, China or the EU.
- The vote will be unanimous, so if a country opposes the establishment of a GTR it can block its adoption by voting against. Or if you are not able to vote, you can abstain.
- Contracting Parties transposing the UN GTR inside their own legislation would have whole control and liability of their certification system:
 - No obligation to recognize third-party certification
 - The certification system would have as a basis the technical requirements (UN GTRS) transposed in other Contracting Parties to the Agreement (accordingly)

Global Technical Regulations (GTR) under the 1998 Agreement



1. Door locks and door retention components
2. Measurement procedure for two-wheeled motorcycles equipped with a spark or compression ignition engine in terms of emission of polluting gases, CO₂ emissions and fuel consumption
3. Motorcycle brake system
4. Test procedure for compression ignition engines and spark ignition engines fueled with natural gas or liquefied petroleum gas for the emission of pollutants
5. Technical requirements of on-board diagnostic systems (OBD) for road vehicles
6. Safety glazing materials for motor vehicles and equipment for motor vehicles
7. Headrest
8. electronic stability control systems
9. Pedestrian Safety
10. Emissions out of cycle
11. Test procedure for compression ignition engines that are installed on agricultural and forestry tractors and non-road mobile machines in terms of engine pollutant emissions
12. Regarding the location, identification and operation of the controls, witnesses and indicators of motorcycles
13. Global technical regulation on hydrogen vehicles and fuel cells
14. Post side impact
15. Worldwide harmonized light vehicle test procedures (WLTP)
16. Tires
17. Emissions from the crankcase and evaporation of vehicles of category L
18. On-board diagnostic systems (DAB) for vehicles of category L
19. EVAPorative Emission Test Procedure for the Global Harmonized Light Vehicle Test Procedure (WLTP EVAP)
20. Electric vehicle safety (EVS)

**MODEL INSTRUMENT OF RATIFICATION, ACCEPTANCE OR
APPROVAL**

*(To be signed by the Head of State, Head of Government or
Minister of Foreign Affairs)*

[RATIFICATION / ACCEPTANCE / APPROVAL]

WHEREAS the [title of treaty, convention, agreement, etc.] was [concluded, adopted, opened for signature, etc.] at [place] on [date],

AND WHEREAS the said [treaty, convention, agreement, etc.] has been signed on behalf of the Government of [name of State] on [date],

NOW THEREFORE I, [name and title of the Head of State, Head of Government or Minister of Foreign Affairs] declare that the Government of [name of State], having considered the above-mentioned [treaty, convention, agreement, etc.], [ratifies, accepts, approves] the same and undertakes faithfully to perform and carry out the stipulations therein contained.

IN WITNESS WHEREOF, I have signed this instrument of [ratification, acceptance, approval] at [place] on [date].

Future development of work of AC.3

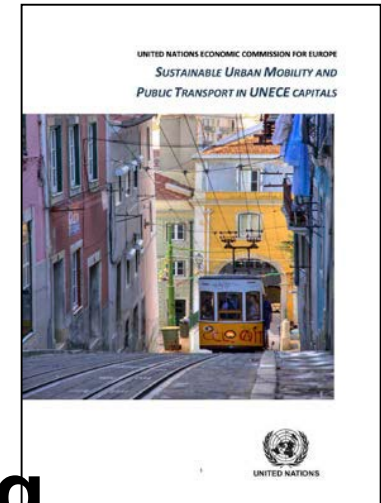
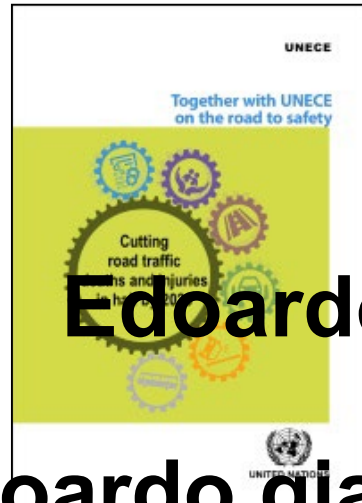
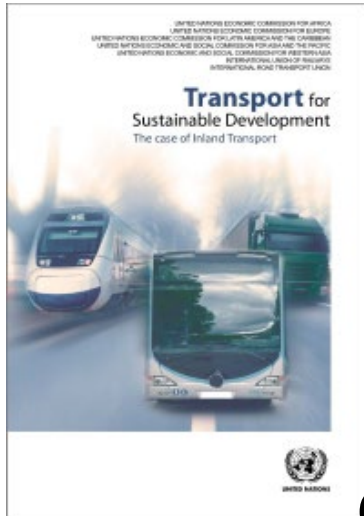
- Draft programme of work (PoW) under the 1998 Agreement

ECE/TRANS/WP.29/2019/31/Rev.1

- Revised Framework document on automated/autonomous vehicles

ECE/TRANS/WP.29/2019/34/Rev.1

Thank you for your attention



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