

**WORLD FORUM FOR
HARMONIZATION OF VEHICLE REGULATIONS
WP.29**

Improving the Environment by Cleaner Vehicles in Use

Walter Nissler

UNECE, Sustainable Transport Division



UNECE and Vehicle Regulations

The World Forum for Harmonization of Vehicle Regulations, WP.29

What is WP.29 doing?



Emissions of pollutants and CO₂



General safety



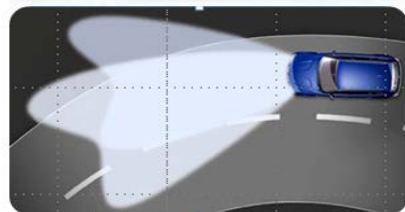
Passive safety



Noise

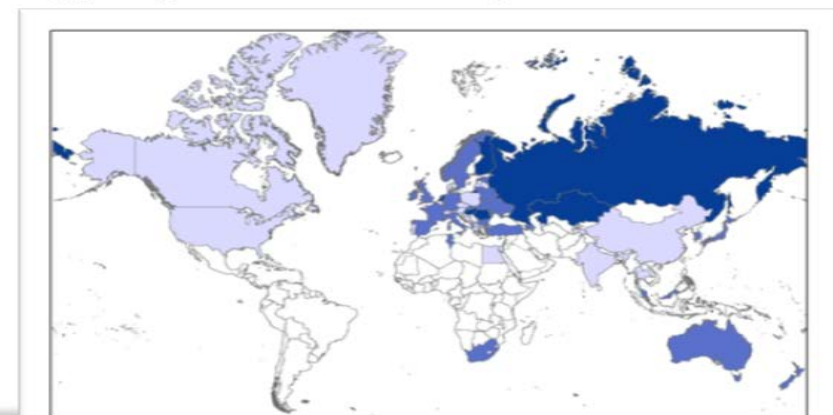


Active safety



Lighting and light signalling

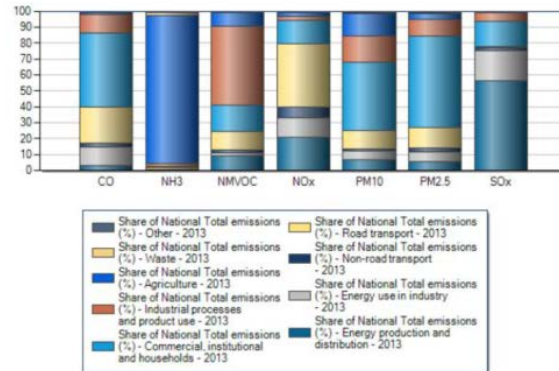
Geographical scope of WP.29



Countries contracting parties to Vehicle Regulations Agreements
Number of Agreements
1 (lightest blue)
2 (medium blue)
3 (darkest blue)

Vehicle Pollutant Emissions

Transport Pollutant Emissions



Babylonian language problem

Vehicle regulation

Exhaust gas at tailpipe

- PM [mg/km] or [g/kWh] or [No/km]
- NO_x [mg/km] or [g/kWh]
- CO [mg/km] or [g/kWh]
- HC [mg/km] or [g/kWh]

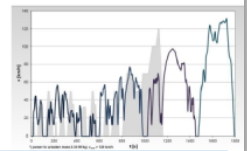
Environmental legislation

Mean air concentration

- PM 10µm µg/m³ 24h-mean
- PM 2,5µm µg/m³ 24h-mean
- NO₂ µg/m³ 1-hour mean
- SO₂ µg/m³ 10-minute mean
- O₃ µg/m³ 8-hour mean

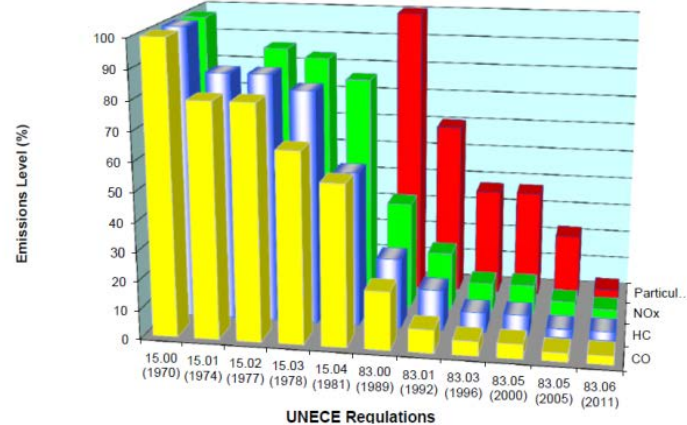
First phase of Worldwide harmonized Light vehicle Test Procedures (WLTP) - March 2014

- Discrepancy between test results and real consumption increased
- New test cycle better reflects real driving
- Established as a new global technical regulation (GTR No. 15) into the Global Registry
- Impact:
 - more accurate information on fuel consumption and CO₂ emissions for both regulators and consumers



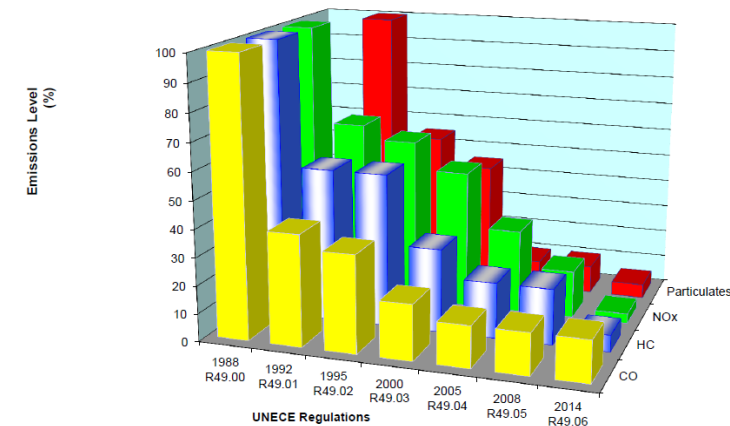
WP.29 Pollutant Emissions

EVOLUTION OF EMISSION LIMITS OF PASSENGER CARS



WP.29 Pollutant Emissions

EMISSION LIMITS FOR HEAVY DUTY VEHICLES



UNECE and Vehicle Emission Regulations

• UN Regulations

- No. 24 - compression-ignition engines visible pollutants
- No. 40 - motorcycles positive-ignition gaseous pollutants
- No. 47 - mopeds positive-ignition gaseous pollutants
- No. 49 - heavy duty vehicles compression-ignition & positive-ignition engines gaseous and particulate pollutants

- No. 83 - emission of pollutants according to engine fuel requirements
- No. 96 - agricultural and forestry vehicles compression-ignition engines pollutants
- No. 101 - passenger cars CO₂ emission and fuel consumption
- No. 103 - replacement pollution control devices
- No. 132 - heavy duty vehicles, agricultural and forestry tractors Retrofit Emission Control device



• UN GTRs

- No. 2 - Two-wheeled motorcycles measurement of the emission of gaseous pollutants, CO₂ emissions and fuel consumption
- No. 4 - test procedure for compression-ignition engines and positive-ignition engines fuelled with NG or LPG regarding the emission of pollutants
- No. 5 - technical requirements for OBD
- No. 10 - Off-cycle emissions
- No. 11 - test procedure for compression-ignition engines for agricultural and forestry tractors and in Non-Road-Mobile-Machinery regarding the emission of pollutants
- No. 15 - Worldwide harmonized Light vehicle Test Procedures



The 1997 Agreement

Principal elements of the 1997 Agreement

Eligible Contracting Parties to the 1997 Agreement:

Members of UN

The 1997 Agreement provides:

Legal framework for the adoption of uniform UN Rules for PTI of vehicles in use

Reciprocal recognition of certificates of such inspections for cross-border use of vehicles



1997 Agreement

UN Rule No. 1

For environmental issues

UN Rule No. 2

For safety inspection



Current PTI regulations (UN Rules)
Commercial vehicles - Vehicles of Category N2 and N3
Coach and busses - Vehicles of Category M2 and M3 (Mass > 3.5t)

WP.29 has agreed to update the UN Rules

Next steps - Amendments in discussions
Scope extension - Including vehicles below 3.5t i.e. passenger cars and vans
Update of technical provisions - e.g. for cars

Future
Extend content - Include elements relevant for level of PTI (test-equipment, skills & training of inspectors, supervision)
Make it a set of harmonized technical provisions - for vehicles in use derived from those of the 1958 & 1998 Agreements





**SAFE, CLEAN, SECURE AND EFFICIENT
MOBILITY FOR PEOPLE AND FREIGHT**

- Inclusive International Legal Architecture
- Effective Public Administration
- International Cooperation
- Innovative Financing
- New Technologies
- Social Responsibility

enablers

objectives

- Seamless B / C
- Facilitated international transport
- Reduced GHG emissions
- Reduced air / noise pollution
- Increased P.T. Mobility Choices
- Zero traffic fatalities and injuries
- Efficient transport services
- Enjoyable walking and cycling

*The future
Inland Transport
WE WANT!*

