

## How does UNECE's work help enhance pedestrian safety?



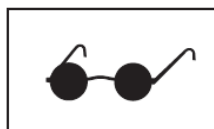
safety for vulnerable road users. In particular, parents, school authorities and public authorities should join efforts to create a safe environment for children to learn and practice road safety.

The 1968 Convention on Road Signs and Signals and the 1971 European Agreement Supplementing the 1968 Convention on Road Signs and Signals are also important legal instruments that aim at increasing road safety through the international harmonization of road signs and signals. The Convention prescribes light signals for pedestrians and road markings relating to pedestrian crossings. There are also various road signs relating to pedestrians and their safety.



### The Consolidated Resolution on Road Signs and Signals (RE.2)

It is similar to RE.1 in that it recommends best practices for road signs and signals either not covered at all or not covered in detail. An example is the sign relating to blind pedestrians.



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A great majority of activities of the World Forum for Harmonization of Vehicle Regulations (WP.29) and the Working Party on Road Traffic Safety (WP.1) concern road safety and many initiatives enhance the safety of pedestrians and other vulnerable road users. WP.29 is a UNECE body that, in the framework of United Nations legal instruments, develops harmonized vehicle regulations that can be applied worldwide. These regulations promote the design and construction of safer and more environmentally-friendly vehicles. To date, over 140 vehicle regulations have been developed in areas such as passive safety, pollution and energy. The regulations are based on detailed research and subsequent adoption by WP.29 members. They are all annexed to and form an integral part of the 1958 and 1998 "Vehicle Regulations" Agreements.

### Pedestrians and Vehicles

Studies have concluded that heads and legs are the body areas that are most affected by contact with the front end of vehicles in case of accidents involving pedestrians. On the vehicles, the bonnet top, the windscreen and the front pillars are the parts which have a high probability for contact with pedestrians. The UN GTR No. 9 and UN Regulation No. 127 link the above body regions and vehicle contact areas with an appropriate test regime. The testing regime is based on separate component tests, i.e. separate head and leg impactors are used. The specifications of the impactors and the application of the tests are currently under revision to better reflect human behaviour.

### Quiet Vehicles

Today's road vehicles can be extremely quiet. One of WP.29's projects aims at setting minimum sound requirements for hybrid and electric vehicles. Sound emission could be activated automatically in certain operating conditions to aid visually-impaired and other vulnerable pedestrians to detect the presence, direction, and location of those vehicles. Initially, the regulation is to cover electric and hybrid-electric vehicles. In a second phase, work will be done to amend the UN GTR to cover all quiet vehicles regardless of their propulsion system. The World Forum is expected to adopt this regulation by 2015.

### Adaptive Dipped Beams (ADB)

ADB became a type-approved technology in UN Regulation No. 48. The Adaptive Dipped Beams replace conventional static systems which only project a light beam onto the road.

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In contrast, ADB automatically adapts to the ambient conditions, the vehicle's behaviour and to the road's geometry. The latest innovations use sensor detectors such as infrared cameras. A person walking at night along the road may not be visible from a vehicle with a conventional lighting system, but ADB will detect and highlight their presence to the driver.

### Rear-view mirrors

In 2014, the World Forum is expected to adopt amendments to UN Regulation No. 46 that would allow the replacement of all rear-view mirrors on motor vehicles by camera monitor systems (CMS). The optional or mandatory installation of CMS will improve the field of vision of vehicle drivers by eliminating all blind spots. The infrared sensitivity of such systems can provide enhanced vision for the driver in reduced visibility and can also offer assistance by including additional information and warnings such as the distance to fixed or moving objects. In this respect, CMS will considerably increase not only motor vehicle safety, but also the safety of vulnerable road users, especially pedestrians and cyclists.

### The Transport, Health and Environment Pan-European Programme (The PEP)

The PEP promotes walking as a viable means of urban mobility. This includes walking school bus campaigns for children (PediBus) to show that walking can be fun. It also identifies requirements for safe pedestrian routes.

UNECE first pioneered road safety activities in the United Nations system with a working group on the prevention of road accidents in 1950. Then, in 1988, WP.1, an intergovernmental working group, was established. Today, WP.1 remains the only permanent body in the United Nations system that focuses on improving road safety. Its primary function is to serve as a guardian of the United Nations road safety legal instruments. The 1968 Conventions on Road Traffic and on Roads Signs and Signals, and other UNECE legal instruments address the main factors of road crashes.

SC.1 – or the Working Party on Road Transport – manages a number of road transport agreements, including **the European Agreement on Main International Traffic Arteries (AGR)**. The AGR Agreement also specifies a number of international obligations for its Contracting Parties in relation to the provision of safer road infrastructure for vulnerable road users. Many countries around the world have become Contracting Parties to UN road safety and road transport conventions and benefit from their implementation.

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### The 1968 Convention on Road Traffic

It is a key legal instrument which forms the basis for the majority of traffic rules around the world. These rules have existed for a long time and they need to be respected or enforced to enhance pedestrian safety. The Convention puts the onus on vehicle drivers to take care of vulnerable road users, such as pedestrians, children, elderly persons and the disabled. Pedestrian crossings must be approached at low speed to give way to pedestrians and if necessary, to stop. This also applies to pedestrians boarding or descending from public transport vehicles. In addition, drivers must not cut across troop columns, files of schoolchildren accompanied by someone in charge or other processions.

Pedestrians are to use pavements (sidewalks) and to obey light signals. If there are no pavements, pedestrians walking on the carriageway should keep close to the edge. Pedestrians are recommended to walk on the side of the road facing oncoming traffic and to walk, also, in single file. Walking is prohibited on motorways. On a carriageway at night, processions or groups of pedestrians must walk on the side of the road facing oncoming traffic and comply with special lighting rules detailed in the Convention.

### The 1971 European Agreement Supplementing the 1968 Convention on Road Traffic

It was introduced to unify the rules governing road traffic in Europe. Provisions are similar to those in the 1968 Convention, but set higher standards by additional and more precise requirements. For example, in order to cross a carriageway elsewhere than at a pedestrian crossing, pedestrians must cross at right angles to the axis of the carriageway. The Agreement also contains special rules applicable to signposted residential areas including drivers proceeding at very low speed as specified by national legislation and in any event, not exceeding 20 km per hour. Pedestrians may make use of the road over its entire width, including for playing games, without impeding vehicular traffic unnecessarily.

### The Consolidated Resolution on Road Traffic (RE.1)

It addresses, in greater detail, some road traffic issues and recommends (non-binding) best practices. The focus is on the role of public authorities in the planning, construction and maintenance of roads and other infrastructures to meet the general needs of pedestrians, as well as the specific needs of children on the way to and from school and persons with reduced mobility and elderly persons. The pedestrian- and other vulnerable road user-related best practices also include education campaigns and other awareness-raising events targeted at the entire spectrum of road users in order to create a culture of road