PIARC TECHNICAL COMMITTEE ON ROAD SAFETY

PIARC's Technical Committee for Road Safety recognizes that 90% of traffic deaths occur in Low- and Middle-Income Countries, and uses this information to assess, identify and share best practices of road safety activities for LMICs by developing documents and case studies highlighting international practices and lessons learned. In addition, the technical committee is focused on making proven countermeasures that are effective in reducing the likelihood and severity of crashes, available to LMICs for consideration in safety project development.

PIARC VEHICLES SAFETY

One of the most important purposes of the PIARC Road Safety Technical Committee is to update the Road Safety Manual. The PIARC RSM is designed to help countries at every stage of infrastructure development fulfill road safety objectives. PIARC has highlighted the contribution of safe vehicles increasing road safety. For this purpose, PIARC has produced reports, case studies, and documents related to vehicle safety, available to all road authorities and stakeholders.

PIARC GLOBAL ROAD SAFETY NOWLEDGE EXCHANGE
VEHICLES SAFETY

Vehicle Safety Fundamentals

In vehicles, active safety systems play a preventive role in mitigating crashes by providing an advance warning or by providing the driver with additional assistance in steering/controlling the vehicle. On the other hand, passive safety systems intend to limit the damage caused to occupants of a vehicle and other road users in the event of a road crash.

The UN has prioritized 8 Vehicle Safety Standards:
1-2: Frontal impact protection and side impact protection (R94 and R95)
3: Electronic stability control (R140)
4: Pedestrian protection (R127)
5-6: Seat-belts and seat-belt anchorage (R14 and R16)
7: Child restraints (R129)
8: Motorcycle anti-lock braking systems (R78)
No Low-income Countries have implemented any of the eight priority UN vehicle safety standards.
Only 4% of Lower Middle-income Countries have implemented the priority UN vehicle safety standards R94, R95, R140, R127 and R78.

Vehicle Safety Issues

The various vehicles' safety features have penetrated countries to different extents. "Standard equipment" in new vehicles differs between countries. In many LMICs vehicle safety is not effectively regulated through design standards or maintained through mandatory vehicle inspection schemes. Depending on regulations in place per destination market, vehicles are produced with different safety features. Automobile companies frequently "de-specify" life-saving features in newer models sold in countries where regulatory frameworks do not require these features.

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United Nations Decade of Action for Road Safety

The United Nations (UN) Second Decade of Action for Road Safety, aims to reduce road traffic deaths and injuries by at least 50% from 2021 to 2030. The Safe System approach – a core feature of the Decade of Action – recognizes that road transport is complex and places safety at its core. It also recognizes that humans, vehicles and the road infrastructure must interact in a way that ensures a high level of safety. Based on the Safe System Approach vehicle safety is increasingly critical to preventing crashes and contributes to substantial reductions in the number of deaths and serious injuries on the road. Therefore, vehicles should be designed to ensure the safety of those inside and those outside them.

Vehicle Safety Measures

Governments may provide, through legislation, a minimum set of safety standards for vehicles. It is necessary to ensure the adoption of high-quality harmonized safety standards, through mandatory certification and registration systems for new and used vehicles based on established safety requirements and combined with routine inspections. Regulations for the export and import of used vehicles that are accompanied by inspections at entry and exit points, and mandatory periodic technical inspections of vehicles, are of critical importance for LMICs. Furthermore, building demand for safer vehicles by encouraging independent new car assessment programs could increase road safety. Regarding automated vehicles, LMICs should start with small pilot deployments of the most mature automated services; safety-related automated services are preferable, as road safety is the highest motivation for deployment.

Vehicles Safety Recommendations

Providing a safe operating environment for road users is a primary responsibility of the governments and industry-focused organizations that design, build, maintain, and regulate roads and vehicles.
Harmonized legislative standards for vehicle design and technology should be applied to ensure a uniform and acceptable level of safety worldwide. Also, periodic inspections for issuing required legal certificates and random inspections on the roads should be conducted.

A well-chosen combination of passive safety measures and new techniques like electronic stability control may give a strong benefit to LMICs' road safety.
Regarding vehicle automation, LMIC governments and the transport industry should be prepared to avoid being caught off guard and not to get left behind by the global community.

Read More

- Road Safety Manual - Road Safety Management - The Safe System Approach
- Automated Vehicles – Challenges and Opportunities for Road Operators and Road Authorities
- Overweight Vehicles: Impact on Road Infrastructure and Safety