PIARC TECHNICAL COMMITTEE ON ROAD SAFETY

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 through developing documents and case studies highlighting international practices and lessons learned. In addition, the technical committee is focused on making proven countermeasures that effectively reduce the likelihood and severity of crashes available to LMICs for consideration in safety project development.

PIARC ROAD INFRASTRUCTURE

A key dissemination tool for road safety developed by the PIARC Road Safety Technical Committee is the Road Safety Manual (RSM). The PIARC RSM is designed to help countries at every stage of infrastructure development fulfill road safety objectives. In addition, PIARC has produced many infrastructure-related reports, case studies, and documents available to all road authorities and stakeholders. The produced documents include detailed information and up-to-date recommendations on the planning, design, implementation, operation and maintenance of road infrastructure according to the Safe System Approach.

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Road Infrastructure Fundamentals

Road infrastructure is often the single most significant factor that contributes to the severity outcome(s) of a crash. In most countries, and especially in urban areas, more than half of all road fatalities and severe injuries happen on less than 10% of the total road network length.
88% of pedestrian travel is on 1-or 2- star roads.
86% of bicycle travel is on 1- or 2- star roads.
67% of motorcyclist travel is on 1- or 2- star roads.

Road Infrastructure Issues

Fatalities and serious injuries are unacceptable consequences of mobility and the design of road transport system worldwide. Current barriers to effective infrastructure treatments include:

- Cost
- Issues in acceptance/compliance
- Design issues
- Implementation issues
- Maintenance

Monitoring, analyzing, and evaluating road networks are usually omitted, although they are equally critical to ensure expected outcomes are met. Likewise, assessment of the safety performance and impact of changes is often overlooked. Acceptance of road safety treatments and countermeasures by road users is a significant issue in LMICs; it is likely that the treatment effectiveness will be higher due to increased compliance.

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 Global Plan for the Decade of Action for Road Safety 2021-2030 rejects business as usual and calls on governments and stakeholders to take a new path that prioritizes and implements an integrated Safe System approach that squarely positions road safety as a key driver of sustainable development. According to the Safe System Approach, road infrastructure must be planned, designed, built and operated to enable multimodal mobility, including shared/public transport and walking and cycling. Focus on improvements in infrastructure and vehicle safety over the medium to long term will be essential in providing a forgiving system.

Road Infrastructure Measures

Clear and well-defined policies related to the delivery of Safe System Infrastructure are required to drive road safety improvements. Standards, guidelines, and tools are mechanisms to translate policy into action. Care should be taken when borrowing policy from other countries to ensure that it fits local conditions.

Risk assessment should be undertaken analytically by road authorities for each segment and the road network as a whole. For existing road networks, where data is available, assessment of crash data should be undertaken to identify high-risk locations.

Regarding vehicle automation, LMICs should prepare roads for automation making as many roads as possible smarter, starting with the main highways and corridors. This action would imply road infrastructure improvements related to: lane markings, lavements (distress, irregularities), visibility of vertical signs etc, leading to safer roads for both human-driven and automated vehicles.

Road Infrastructure Recommendations

Road Safety Audits (RSA) and Inspections (RSI) enhance safety. Undertake road safety audits on all sections of new roads (pre-feasibility through to detailed design) and complete assessments using independent and accredited experts to ensure a minimum standard of three stars or better for all road users. Also, complete assessment with road safety inspections on critical locations of existing roads. iRAP provides an affordable solution for RSA and Road Safety Inspections (RSI) and is recommended especially for LMICs.

The costs of road improvements are manageable in context. Studies indicate that as little as 1-3% of road construction budgets are needed to make significant road safety improvements. Furthermore, when the value of lives saved, and serious injuries prevented are considered, the return on investment is positive.

Read More

- Road Safety Manual. Planning, Design & Operation. Infrastructure Management
- Proceedings of the "International Seminar and Workshop on Safer Roads by Infrastructure Design and Operation"
- Documents Relevant to Road Infrastructure and Transport Security A PIARC Literature Review
- Proceedings of the PIARC International Seminar on: "Road Safety in Low- and Middle-Income Countries: Issues and Countermeasures"
- Proceedings of the Internal Workshop "Policies and Programs for Road Safety Management"
- Smart Roads Classification
- Review of Global Road Safety Audit Guidelines with Specific Consideration for Low and Middle Income Countries
- Well-prepared projects. A PIARC collection of case studies