

# Introduction to PIARC Road Safety Committee and Road Safety Manual

*John Milton, Ph.D, PE, RSP<sub>21</sub>, PTOE*

*Chair TC.3.1 Committee on Road Safety, PIARC*

National Workshop for Safer Road Infrastructure

Dar Es Salaam, 16-18th March 2021



TANZANIA

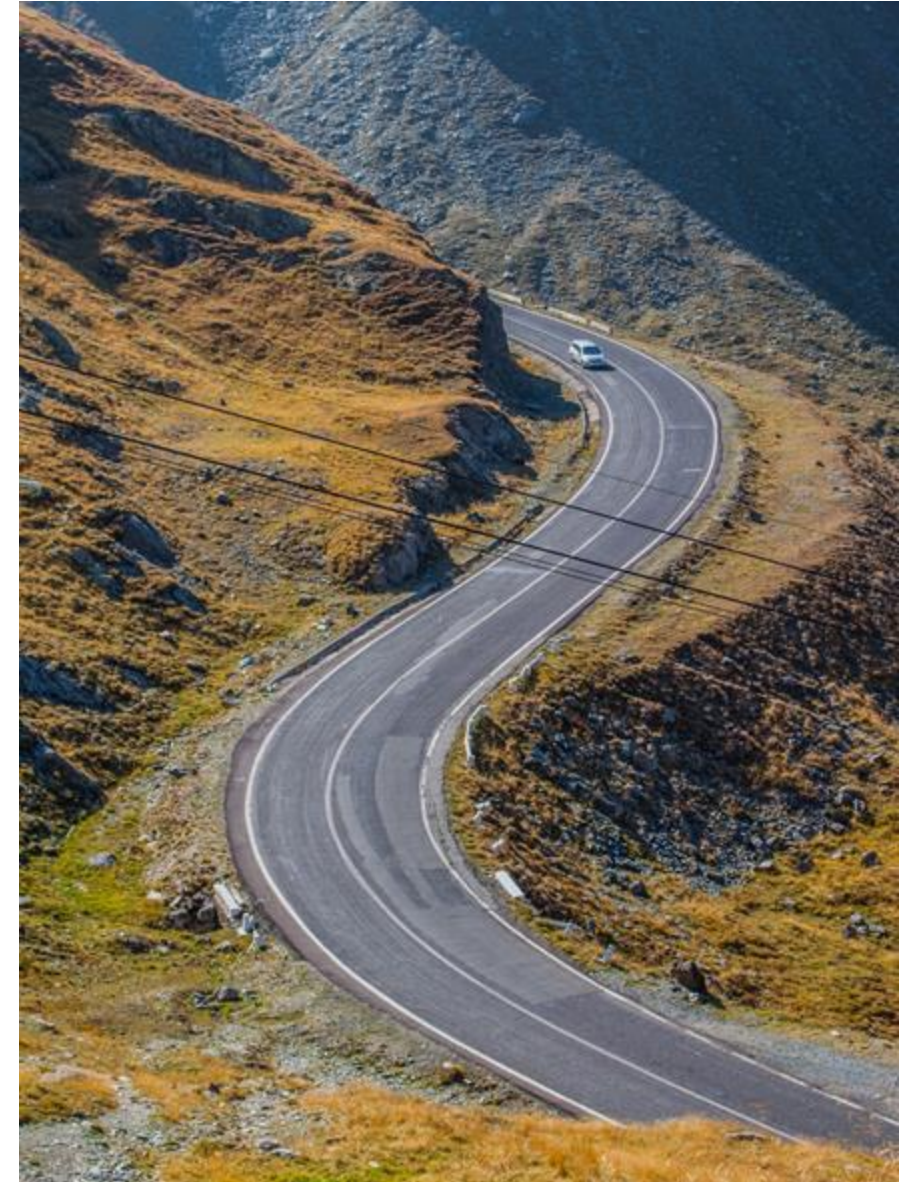


International Road Federation  
Fédération Routière Internationale  
Federación Internacional de Carreteras



# Key discussion Points

- Introduction: PIARC TC 3.1 Road Safety
- Current Road Safety Working Groups
- Introduction to the RSM



# What we do - What we don't do

- **Our mission: serve the needs of our members**
  - Member countries
  - Experts
- **We share best practice and recommendations**
  - Rather than research
- **What we do not do:**
  - **We do not engage in standardization**
  - **We do not express opinions or analysis on national or regional issues**
    - This is a task for member countries or regional road organisations
  - **As an unbiased international organization, PIARC does not endorse, advocate for, or discourage, the use of specific policies or tools by its member nations and organizations. Those are national decisions.**

# Introduction

Technical Committee 3.1 on Road Safety

Focused on the reduction of fatal and serious crashes worldwide

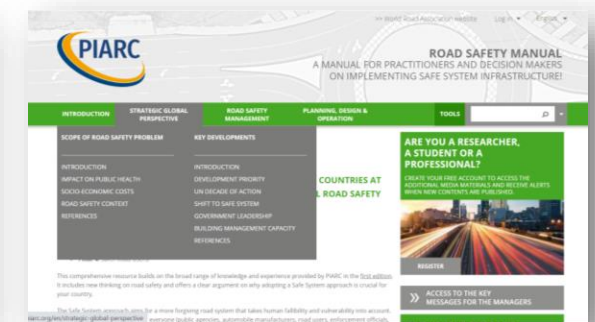
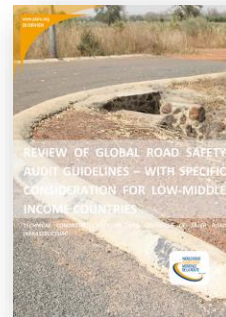
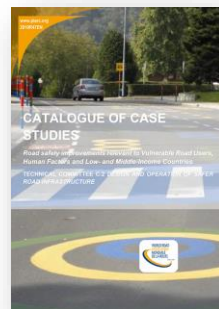
Particular interest in vulnerable road users and LMIC

Past Cycle: TC 1.1 National Policy and Programmes and TC 1.2 – Design and Operation of Safer Road Infrastructure



# PIARC's Recent Work on Road Safety

- **Report** on Implementation of National Safe System Policies: A Challenge
- Road Safety - **Catalogue** Of Case Studies
- **Review** of Global Road Safety Audit Guidelines – With Specific Consideration for Low- and Middle-Income Countries
- **Report** on Road Safety Evaluations Based on Human Factors Method
- Setting Credible Speed Limits - Case Studies **Report**
- Online Road Safety **Manual**
- **And many more:** <https://www.piarc.org/en/activities/PIARC-Directory-Technical-Reports/PIARC-Technical-Reports-Cycle-2016-2019>



# New Working Groups

- **3.1.1. Specific road safety issues for LMICs**
- **3.1.2. Implementation of proven countermeasures**
- **3.1.3. Update Road Safety Audit Guidelines**
- **3.1.4. Implications of connected and automated vehicles**
- **3.1.5. Update of the Road Safety Manual**

## 3.1.1. Specific road safety issues for LMICs

- Identify successful stories, paying special attention to those in LMIC countries, with specific examples of safety improvement and management of road safety (in terms of key performance indicators).
- Take into account safety of vulnerable users.
- Identify the tools, processes, checklist, etc. used to achieve success.
- Identify successful stories, paying special attention to those in LMIC countries, in terms of improved approach to the management of road safety.
- Identify current PIARC reports considered important for LMIC.
- Analyze measures and plans related with “*Decade of Action for Road Safety 2011-2020*” and “*Agenda 2030*”.

# WG 3.1.2. Implementation of proven countermeasures

- Increase road safety through the implementation of proven countermeasures to reduce accidents in motorways, rural roads and urban roads, paying special attention to vulnerable road users, speed management and fatigue.
- Describe the process for selecting countermeasures given road user consideration and define good practices in strategies related to traffic safety in urban areas, paying special attention to vulnerable road users.
- Analyze contribution of proven countermeasures related with “*Decade of Action for Road Safety 2011-2020*” and “*Agenda 2030*”.

# WG 3.1.3. Update Road Safety Audit Guidelines

- Update the Road Safety Audit Guidelines for Safety Checks on New Road Projects (2011).
- Add sections to provide exemplar guidance to LMICs.

# WG 3.1.4. Implications of connected and automated vehicles

- Analysis on classification of traffic accidents which automated vehicle can/cannot prevent.
- Evaluate implications of connected and automated vehicles in road safety from the point of view of road design considerations, CAV users and all other users in special vulnerable users.
- Identify best practices taking into account CAV to improve road safety.
- Identify safety issues as far as transition period to automated driving concerns.
- Consider the PIARC report on Road safety infrastructure's role in the transition to automated driving systems.

# WG 3.1.5. Update of the Road Safety Manual

- Updates of Road Safety Manual focus on the work carried out by the TC.
- Continue with the works carried out by *T.C.C.1 – National Road Safety Policies and Programs* and *T.C. C.2 - Design and Operation of Safer Road Infrastructure* within Cycle 2016-2019 to complete the incorporation of pertinent PIARC reports on road safety (from 2003).
- Launch a survey among HMLICs regarding the use, needs, gaps and issues regarding RSM and perform gaps and needs assessment to recommend changes in how to implement activities, based on priority.
- Develop case worksheets or checklist to aid in the implementation and understanding of the RSM, particularly for LMICs.
- Encourage implementation of Road Safety Manual.

# Other outputs to be defined by the Technical Committee

- Disseminate and share knowledge.
  - 2 Seminar in LMIC – Currently requests by Tunisia and Malaysia
  - Possible conferences/workshops in HIC
  - 2 articles in routes/roads
  - Cooperative TRB Webinar and other Webinar activities
  - International, national and local conference participation
  - Development of topic specific training and dissemination material
  - Partnership activities with IRF, iRAP, and PIARC in Tanzania Ten Steps Project
- Encourage networking.

# Why a Road Safety Manual?

- A global crisis of death and serious injury in road crashes
- A largely preventable problem
- Safe Systems Approach is recommended for adoption in all countries
- Leadership and institutional capacity are vital for results
- An urgent development priority

# Foundation

## Road Safety Manual based on Safe Systems Approach

- Shift from crash prevention in general towards prevent deaths and injuries
- Directly addresses the needs of vulnerable road users and others
- Encourages safety to be designed into developing road networks rather than being considered an afterthought

- **PIARC Online Road Safety Manual**  
A comprehensive resource (<https://roadsafety.piarc.org>)



The screenshot shows the homepage of the PIARC Road Safety Manual. At the top left is the logo for the World Road Association (WRA) in English, French, and Spanish, with the acronym PIARC below it. The main title 'ROAD SAFETY MANUAL' is prominently displayed in the upper right, with the subtitle 'A MANUAL FOR PRACTITIONERS AND DECISION MAKERS ON IMPLEMENTING SAFE SYSTEM INFRASTRUCTURE' underneath. A green navigation bar contains the following menu items: INTRODUCTION, STRATEGIC GLOBAL PERSPECTIVE, ROAD SAFETY MANAGEMENT, PLANNING, DESIGN & OPERATION, and TOOLS. A search bar is located to the right of the navigation bar. The main content area features a large heading 'WELCOME TO THIS WORLD ROAD ASSOCIATION GUIDE' followed by a paragraph: 'THE NEW ROAD SAFETY MANUAL (RSM) IS DESIGNED TO HELP COUNTRIES AT EVERY STAGE OF INFRASTRUCTURE DEVELOPMENT TO FULFILL ROAD SAFETY OBJECTIVES.' Below this is a note: 'It is aligned with key pillars for the United Nations Decade of Action for Road Safety 2011-2020:'. On the right side, there is a green call-to-action box with the text 'ARE YOU A RESEARCHER, A STUDENT OR A PROFESSIONAL?' and 'CREATE YOUR FREE ACCOUNT TO ACCESS THE ADDITIONAL MEDIA MATERIALS AND RECEIVE ALERTS WHEN NEW CONTENTS ARE PUBLISHED.' Below this box is a photograph of a city street at night with light trails from traffic.

# PIARC Online Road Safety Manual

- Free of charge
- 3 Main Parts, 12 chapters
- Case studies and links to detailed technical material and other references
- Can be downloaded and printed in chapters
- UN Resolution 74/299 Improving Road Safety – 31 August 2020
- Aligned with key pillars for the United Nations Decade of Action for Road Safety 2011-2020:

**Pillar 1: Road Safety  
Management**

**Pillar 2: Safer Roads and  
Mobility**

**Pillar 3: Safer Road User**



# Chapter organization

- Key messages for managers
- Key principles for each of the topics
- Discussion to explain the key principles
- Case studies
- Links to detailed technical material and other references
- Getting started, making progress, and consolidating activity section

The screenshot displays the PIARC Road Safety Manual website. The header includes the PIARC logo and the title 'ROAD SAFETY MANUAL: A MANUAL FOR PRACTITIONERS AND DECISION MAKERS ON IMPLEMENTING SAFE SYSTEM INFRASTRUCTURE!'. The navigation menu features categories like 'INTRODUCTION', 'STRATEGIC GLOBAL PERSPECTIVE', 'ROAD SAFETY MANAGEMENT', 'PLANNING, DESIGN & OPERATION', and 'TOOLS'. The main content area is titled '4. THE SAFE SYSTEM APPROACH' and includes a 'KEY MESSAGES' section with a list of bullet points. A sidebar on the left provides a table of contents for the 'SAFETY MANAGEMENT SYSTEM'.

World Road Association website | Log in | English

**PIARC**

**ROAD SAFETY MANUAL**  
A MANUAL FOR PRACTITIONERS AND DECISION MAKERS  
ON IMPLEMENTING SAFE SYSTEM INFRASTRUCTURE!

INTRODUCTION | STRATEGIC GLOBAL PERSPECTIVE | ROAD SAFETY MANAGEMENT | PLANNING, DESIGN & OPERATION | TOOLS

Home // Road Safety Management // Safe System Approach

ROAD SAFETY MANAGEMENT

SAFETY MANAGEMENT SYSTEM

- » THE SAFE SYSTEM APPROACH
- INTRODUCTION
- CURRENT TRANSPORT SYSTEM
- LONG-TERM GOAL
- CRASH CAUSES
- SAFE SYSTEM RESPONSIBILITY
- SAFE SYSTEM PRINCIPLES
- SAFE SYSTEM ELEMENTS
- SAFE SYSTEM IMPLEMENTATION
- REFERENCES

SAFETY DATA

TARGET AND STRATEGIC PLANS

4. THE SAFE SYSTEM APPROACH

**KEY MESSAGES**

- The Safe System approach is the most effective way of considering and responding to fatal and serious casualty crash risks on a network.
- This approach is based on an ethical position where it can never be acceptable that people are seriously injured or killed on the network. It provides a set of design and operating principles to guide action on the journey to the long term elimination goal.
- The long-term Safe System goal is the elimination of death and serious injuries on a country's roads.
- The Safe System is being adopted by an increasing number of countries and forms the basis for the UN Decade of Action for Road Safety.
- The Safe System requires strong governmental leadership, as well as the engagement of a wide range of sectors.
- The prime responsibility of a road authority and other agencies is to support road users to reach the end of their trips safely.
- The Safe System is based on well-established safety principles — of known tolerance of the human body to crash forces, speed thresholds for managing crash impact energies to survivable levels, and the capacities of vehicles and forgiving infrastructure to reduce crash impact energy transfers to humans.
- A focus on key crash types occurring on a network helps to identify the role and intervention options for each Safe System element.
- System-wide intervention strategies are required to avoid fatal and serious injury crash outcomes, including emergency medical care for crash victims.
- There is a shared responsibility between system designers (who design and operate the roads) and road users, for safe travel outcomes on the road network.
- The Safe System approach compels system designers to provide an safe environment, and to consider the combined system as the major factor in crashes rather than the traditional approach that placed most responsibility for safety on the road user.
- The system design and operation must become forgiving of routine human (road user) error.



## ROAD SAFETY MANUAL

A MANUAL FOR PRACTITIONERS AND DECISION MAKERS  
ON IMPLEMENTING SAFE SYSTEM INFRASTRUCTURE!

INTRODUCTION

STRATEGIC GLOBAL  
PERSPECTIVE

ROAD SAFETY  
MANAGEMENT

PLANNING, DESIGN &  
OPERATION

TOOLS



# PART 1

## Strategic global perspective

Chapter 1: Scope of the road safety problem

Chapter 2: Key developments in road safety



## ROAD SAFETY MANUAL

A MANUAL FOR PRACTITIONERS AND DECISION MAKERS  
ON IMPLEMENTING SAFE SYSTEM INFRASTRUCTURE!

INTRODUCTION

STRATEGIC GLOBAL  
PERSPECTIVE

ROAD SAFETY  
MANAGEMENT

PLANNING, DESIGN &  
OPERATION

TOOLS



## PART 2

# Road safety management

Chapter 3: The Road Safety Management System

Chapter 4: The Safe System Approach

Chapter 5: Effective management and use of safety data

Chapter 6: Road safety targets, investment strategies, plans and projects



## ROAD SAFETY MANUAL

A MANUAL FOR PRACTITIONERS AND DECISION MAKERS  
ON IMPLEMENTING SAFE SYSTEM INFRASTRUCTURE!

INTRODUCTION

STRATEGIC GLOBAL  
PERSPECTIVE

ROAD SAFETY  
MANAGEMENT

PLANNING, DESIGN &  
OPERATION

TOOLS



## PART 3

# Planning, Design and Operation

- Chapter 7: Roles, responsibilities, policy development, and programmes
- Chapter 8: Design for road user characteristics and compliance
- Chapter 9: Infrastructure Safety Management: Policies, standards, guidelines and tools
- Chapter 10: Assessing potential risks and identifying issues
- Chapter 11: Intervention selection and prioritization
- Chapter 12: Monitoring and evaluation of road safety interventions

## ROAD SAFETY MANAGEMENT

---

SAFETY MANAGEMENT SYSTEM

THE SAFE SYSTEM APPROACH

SAFETY DATA

TARGET AND STRATEGIC PLANS

INTRODUCTION

TIMEFRAMES

CAPACITY TO DELIVER TARGETS

ASSESSING SAFETY PROBLEMS

» SETTING TARGET

## CASE STUDIES - TARGET-SETTING

Contained below are a number of case studies on target setting:

### CASE STUDY - Denmark: Road Safety Commission National Action Plan

The need to reduce fatal and injury crashes in Denmark, has led to the development of a national action plan. Every Accident is one too many - a shared responsibility is the official name for the Danish Road Safety Commission National Action Plan 2013-2020. The number of road users killed or injured on Danish roads has halved since 2001. A very important player is the Danish Road Safety commission who sets ambitious road safety targets on a regular basis. The targets are then used and adopted by relevant stakeholders involved making an effort and taking responsibility for implementing the objectives to reach the target in the Action Plan. The stakeholders need to be supported by political commitment and get necessary earmarked funding for road safety to reach the target. [Read More](#) (PDF, 206 kb)

# Thank you for your attention!



**John Milton**

**Chair, TC 3.1 Road Safety**

**miltonj@wsdot.wa.gov**

**@JohnMiltonPhDPE**

World Road Association (PIARC)  
Grande Arche – Paroi Sud – 5<sup>e</sup> étage  
92055 – La Défense Cedex – France



@PIARC\_Roads



World Road  
Association PIARC



World Road  
Association PIARC



World Road  
Association PIARC

**[www.piarc.org](http://www.piarc.org)**

