

**WORLD ROAD  
ASSOCIATION**



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# PIARC International Best Practice Guide for Road Agencies on Air Quality Assessment and Management

**CASANZ Transport Special Interest Group and NZ Transport and Environment  
Knowledge Hub Emissions Group Workshop**

NIWA, Wellington

6<sup>th</sup> December 2018

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Founded in 1909 as 'Permanent International Association of Road Congresses' (PIARC)

Non-political, non-profit Association with consultative status to the United Nations

121 member countries  
40 National Committees

## KNOWLEDGE ACQUISITION AND SHARING

## COMMUNICATION AND DISSEMINATION KNOW-HOW

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

### 17 TECHNICAL COMMITTEES, 6 TASK FORCES

- More than 1000 experts and decision-makers from the member countries of the Association.
- Identify best practice and the role of the international transportation system; share experiences and knowledge through 5 strategic themes.
- Work program reviewed and redefined every 4 years.

#### ST A MANAGEMENT AND PERFORMANCE

- TCA.1 Performance of Transport Administrations
- TCA.2 Road Transport System Economics and Social Development
- TCA.3 Risk Management
- TF A.1 Innovative Financing
- TF A.2 Coordination between National and Sub-National authorities

#### ST B ACCESS AND MOBILITY

- TC B.1 Road Network Operations/Intelligent Transportation Systems
- TC B.2 Winter Service
- TC B.3 Sustainable Multimodality in Urban Areas
- TC B.4 Freight
- TF B.1 Road Design and Infrastructure for Innovative Transport Solutions

#### ST C SAFETY

- TC C.1 National Road Safety Policies and Programmes
- TC C.2 Design and Operations of Safer Road Infrastructure
- TF C.1 Infrastructure Security

#### ST D INFRASTRUCTURE

- TC D.1 Assets Management
- TC D.2 Pavements
- TC D.3 Bridges
- TC D.4 Rural Roads and Earthworks
- TC D.5 Road Tunnels Operations

#### TS E CLIMATE CHANGE, ENVIRONMENT AND DISASTERS

- TC E.1 Adaptation Strategies/Resiliency
- TC E.2 Environment Considerations in Road Projects and Operations
- TC E.3 Disaster Management

#### REGIONAL TASK GROUPS

- Geometric and Structural Design Standards for African Highway Network
- Updating of Guidelines for Rural Roads

#### TERMINOLOGY

### INTERNATIONAL SEMINARS

- > Encourage knowledge transfer and exchange at the regional level in developing countries and countries in transition.
- > Organized jointly with the host country and the Technical Committees.

### NATIONAL COMMITTEES

- > Regional forum for the road and road transport community.
- > Conduct activities on behalf of the Association and disseminate information in the country.
- > Trilingual information Bulletin (English - French - Spanish)

#### Gdańsk 2018

**XV<sup>th</sup> INTERNATIONAL WINTER ROAD CONGRESS**  
February 20-23, 2018

Held every 4 years to exchange information on management and operational practice in winter conditions.  
XV<sup>th</sup> Congress - GDANSK 2018 - Poland

#### WORLD ROAD CONGRESS ABU DHABI

October 6-10, 2019

**26<sup>th</sup> World Road Congress 2019**  
Abu Dhabi United Arab Emirates  
Held every 4 years since 1908 for exchange on policies, approaches and techniques worldwide.



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### Technical Committees' REPORTS

Road Safety Manual  
Road Tunnels Manual  
Road Networks Operations and ITS Manual



### Seminars and Congresses PROCEEDINGS



**ROUTES/ROADS**, the quarterly and bilingual PIARC magazine (English - French): information, news and features

### SOFTWARE

QRAM - A Quantitative Risk Assessment Model (QRAM) to evaluate the risks of dangerous goods transport through road tunnels. Already applied to a wide range of tunnels in several countries.

HDM-4 - Software system for investigating choices in investing in road transport infrastructure.



### TERMINOLOGY

PIARC Road Dictionary is available online at: <http://www.piarc.org/en/Terminology-Dictionaries-Road-Transport-Roads/>

## BECOME A MEMBER

The World Road Association welcomes 4 categories of members: Governments, Regional authorities, Collective members, Individual members.

Contact us via the website [www.piarc.org](http://www.piarc.org) and [info@piarc.org](mailto:info@piarc.org) or by direct request through your country's National Committee.

# WORLD ROAD ASSOCIATION

Exchanging knowledge and techniques on roads and road transportation

NEW CYCLE  
2016 - 2019



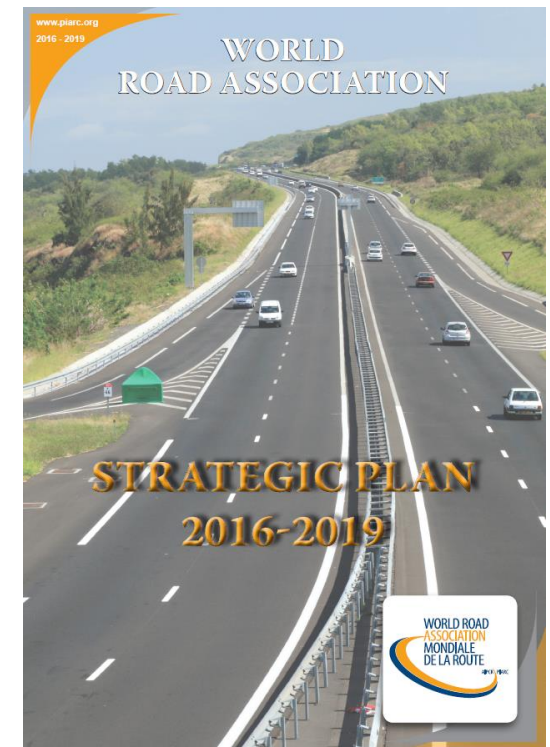
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## PIARC Technical Committees

- **Strategic Theme A - Management and Finance**
- **Strategic Theme B - Access and Mobility**
- **Strategic Theme C - Safety**
- **Strategic Theme D - Infrastructure**
- **Strategic Theme E - Climate Change, Environment and Disasters**



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# Strategic Theme E

## Climate Change, Environment and Disasters

- **TC E.1 Adaptation Strategies/Resiliency**
- **TC E.2 Environment Considerations in Road Projects and Operations**
- **TC E.3 Disaster Management**

The goal of Strategic Theme E is to ‘increase resiliency and protect investments in transportation infrastructure from impacts of climate change events while lessening the impact of road transportation on the environment’.



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# Technical Committee (TC) E.2 Environment Considerations in Road Projects and Operations

## TC E.2 Environment Considerations in Road Projects and Operations

Issue E.2.1 Air quality	
<i>Strategies</i>	<i>Outputs</i>
Identify approaches and methodologies applied in selected countries to conduct air quality analyses. Investigate how road administrations and other authorities monitor air quality and how information is used in road traffic management. Including mitigation policies and measures such as photocatalytic pavements.	State-of-the-art report and recommendations.
Issue E.2.2 Noise mitigation	
<i>Strategies</i>	<i>Outputs</i>
Evaluate and document traffic noise impacts; examination of potential mitigation measures; reasonable and feasible noise mitigation measures, including regulations and guidance setting noise levels.	Report on successful practices with case studies.





## Australia and NZ TC Members

### Chair

- Helen Murphy: Principal Advisor - Major Transport Projects, Department of Environment, Land, Water and Planning, Victoria

### English Speaking Secretary

- Rob Hannaby: Lead Advisor - Environment, NZ Transport Agency

### Air Quality Working Group

- Frank Fleer: Helix Environmental, Victoria
- Andrew Mattes: NSW Roads and Maritime Services

### Noise Working Group

- James McIntosh: Transport for Victoria
- Stephen Chiles: Chiles Ltd, NZ
- Marc Buret: EPA Victoria



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## TC Work Programme

- Road Agency Air Quality Assessment and Management Best Practice Guide
- Road Agency Noise Management Best Practice Guide
- International Road Traffic Noise Criteria Database
- Auralisations to raise awareness about the impact of road traffic noise





# Air Quality Assessment and Management Guide

- **Working Group Lead: Stephen Thomson - Transport Scotland**
- **Content**
  - Public health effects
  - Impact assessment
  - Stakeholder and public engagement
  - Air quality management measures available to road agencies
- **Extensive range of international case studies, e.g.**
  - Vegetation barriers in the Czech Republic to reduce roadside air pollution
  - Photocatalytic pavements and barriers to reduce levels of nitrogen dioxide in various parts of the world
- **Topical issues, e.g.**
  - Merits of Low Emission Zones and urban access controls to improve air quality
- **Conclusions and recommendations, e.g.**
  - Importance of adopting an integrated approach to land use and transport planning
  - Working collaboratively with key stakeholders to achieve optimal outcomes







Exchange knowledges and techniques on roads and road transportation



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# Publication 2019



CONNECTING CULTURES  
ENABLING ECONOMIES  
6<sup>th</sup> to 10<sup>th</sup> October 2019



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6 - 10 OCTOBER, 2019 | ABU DHABI

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# Thank You

# Questions?



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