



Uganda National Roads Authority



PIARC International Seminar on: Climate Change Adaptation and Resilience of Road Networks (in Low- and Middle- Income Countries)

Virtual, 6 - 8 DECEMBER 2021

14.00 – 17.00 EAT

SECOND ANNOUNCEMENT

Organized jointly by:

- World Road Association (PIARC)
- Uganda National Road Authority (UNRA)





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PIARC Program of International Seminars

PIARC (The World Road Association) is a non-political, non-profit organization whose mission comprises organizing international forums, disseminating best practice and promoting efficient tools for decision making in the road transport field.

As part of its work, since 1999 the Association manages the PIARC Program of International Seminars, which aims to strengthening its presence throughout the world, be more receptive to the needs of developing countries and countries with economies in transition and make the results of the Association's work more widely known in those countries.

Technical Committee 1.4: Climate Change and Resilience of Road Networks

PIARC Technical Committee (TC) 1.4 Climate Change and Resilience of Road Networks observes that road and transport owners and operators are required to manage a broad spectrum of threats in the future and these alone and in combination can have a significant impact on the availability of road networks. In order to address climate and other hazards risks to networks (including aging infrastructure, natural disasters, man-made disasters), TC 1.4 aims to update the PIARC International Climate Change Adaptation Framework for Road Infrastructure (developed in previous PIARC cycles) and seeks to identify uniform and holistic methodological approaches to climate change and other hazards resilience. TC 1.4 assesses and identifies the best practice of adaptation and resilience activities for LMICs and plays a fundamental role in providing access to resilience measures and its dissemination among LMICs.

The work of Technical Committee TC 1.4 is carried out around the following topics:

- 1.4.1 Uniform and holistic methodological approaches to climate change and other hazards resilience
- 1.4.2 Update of the PIARC Climate Change Adaptation Framework for Road Infrastructure.

Seminar Objectives

It is recognized that climate change impacts and other hazard events are causing more frequent and severe damage to road infrastructure and operations. This Seminar aims to share ways in which road and transport agencies around the world are making transportation infrastructure more resilient to climate change.





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The goal of the Seminar is to exchange information between countries, with a focus on Sub-Saharan Africa. It will present the necessary recommendations to put in place effective and sound solutions and countermeasures that take into account specificities of these countries. It will include discussions of key learnings and best-practice climate change and resilience examples already in place, and future considerations.

It is also intended that the Seminar will provide an opportunity to discuss the PIARC International Climate Change Adaptation Framework for Road Infrastructure, and to identify its relevance and value for LMICs.

Topics to be covered

- Infrastructure Risk, Vulnerability and Resilience
- Impact of Climate Change, Other Hazards and Threats on Road Infrastructure and Operations
- Building Capacity for Adaptation Economic, Social and Environmental Aspects of Resilience
- Adaptation Frameworks, Strategies, Methodologies and Tools (Including Refinements to the PIARC International Climate Change Adaptation Framework)
- Impacts of COVID-19 on Resilience.

Who should attend?

The PIARC International Seminar is intended for government agencies officials, private operators and managers responsible for the adaptation and resilience of roads. Participation is also open to technical staff involved in designing, executing, and overseeing road works, university academia, researchers and students, and wider supply chain stakeholders interested in further exploring the topics to be discussed at the Seminar.

Virtual Seminar and Dates

Although the city of Kampala, Uganda, was selected as the seminar location, due to the COVID-19 crisis, this Seminar will take place in a virtual format. The Seminar will take place from 6 to 8 December 2021, from 14.00 – 17.00 EAT.





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Format and Languages

The seminar will consist of various thematic sessions where the topics included in the preliminary program (see next paragraph) will be addressed. These sessions have been planned for the three days of the seminar. Each session will include several presentations by members of Technical Committee TC 1.4 as well as by and experts from Sub-Saharan Africa, and experts from other countries around the world. The Seminar will also comprise several networking sessions and panel discussions covering adaptation and resilience.

Languages of the seminar will be **French, English and Spanish with simultaneous translation available.**

Organizing Committee

Ms Caroline Evans	Chair of PIARC Technical Committee 1.4
Dr Mark Henry Rubarenzya	PIARC Vice President-Elect, Responsible for the Seminar
Dr Fabien Palhol	PIARC Technical Committee 1.4, French-Speaking Secretary
Mr Nkululeko Leta	Member, PIARC Technical Committee 1.4
Mr Craig Love	Member, PIARC Technical Committee 1.4

Advisory Committee

Dr Mark Henry Rubarenzya	PIARC Vice President-Elect
Mr Patrick Mallejacq	Secretary General PIARC
Mr Nazir Alli	PIARC President-Elect
Dr Olufunso Somorin	Regional Principal Officer, African Development Bank
Ms Nkechi Ogbonna	Multimedia Broadcast Journalist

Registration Fee

Free of charge for all participants. Participation is expected once you have registered. Cancellation of the registration will be possible in case there is a change of availability for the participant.





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Registration

If you are interested in attending the PIARC International Seminar on Climate Change Adaptation and Resilience of Road Networks (in low- and middle-income countries), please register through the following link:

<https://us06web.zoom.us/meeting/register/tZUpdu2qqjliHdCqKwUx-q3Tr0SrK9nC34R4>

Once registered, you will receive a zoom link for you to access the seminar.

Further information about the Seminar can also be obtained from the Uganda National Roads Authority website where a dedicated link is provided below:

<https://www.unra.go.ug/events>

You can also follow developments about the Seminar via the LinkedIn page which has been developed to enable networking across the world.

[\(1\) International Seminar: Climate Change Adaptation & Resilience of Road Networks \(Uganda\) | Groups | LinkedIn](#)

For further information, please contact:

- Dr Mark Henry Rubarenzya - PIARC Vice President-Elect, Responsible for the Seminar (mark.rubarenzya@unra.go.ug)
- Ms Caroline Evans - Chair of PIARC Technical Committee 1.4 (cevens@ntc.gov.au)





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Program

- i- Seminar contents will be organized according to the following program (some sections can be revised)
- ii- Time in the seminar is scheduled as follows; Uganda 14h to 17h (22h to 1 am Melbourne, 5 am to 8 am Mexico, 19h to 22h China, 15h to 18h UAE, 12h to 15h CET, 12am to 3 am New Zealand)
- iii- Seminar will be translated simultaneously into English, French and Spanish
- iv- Translation will not be provided for the virtual coffee break rooms dedicated for networking

DAY 1: 6 DECEMBER 2021 (East Africa Time)

Opening words (14h00-14h40)

Keynote Address - Representative from Government of Uganda

President of PIARC

PIARC Vice President-Elect: Dr Mark Henry RUBARENZYA

PIARC Strategic Theme 1 Coordinator: Mr Ernesto BARRERA

PIARC Technical Committee (TC) 1.4 Chair: Ms Caroline EVANS

Session 1: INFRASTRUCTURE RISK, VULNERABILITY AND RESILIENCE

(14h40-15h55). Moderator: Dr Fabien Palhol, TC1.4 French Speaking Secretary, France

1- Impact of climate change, all hazard and environmental threats on road infrastructure and operations

Speaker: Dr Robert Ochieng, African Development Bank (AfDB)

2- Climate change vulnerabilities: Feedback from applied studies and insights on methodological tools for road networks - Solomon Islands

Speakers: Dr Marine Lericolais & Dr Sylvie Souchon, Setec

3- Temperature resilient asphalt pavement for climate change adaptation

Speaker: Prof Yinghao Miao, USTB & TC 1.4, China

4- An overview of REAAA climate change and resilience activities

Speaker: Ms Caroline Evans, Chair TC 1.4 & Co-Chair REAAA Climate Change, Resilience and Emergency Management Technical Committee, Australia





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Q&A 15h40-15h55



15 min Networking/Meet the Speaker & virtual coffee break in separate rooms (no translation)

Networking coffee A: International challenges for road resilience (mostly English language but French and Spanish welcome as well).

Networking coffee B: Adaptation and Resilience in Sub-Saharan Africa (mostly French language but English welcome as well).

Networking coffee C: Adaptation and Resilience in Latin-America (mostly Spanish language but English welcome as well).

Panel Discussion: HOW CAN ADAPTATION AND RESILIENCE APPROACHES HELP ROAD OWNERS AND MANAGERS TO BUILD, OPERATE AND MAINTAIN THEIR ROAD NETWORKS?

(16h10 – 17h00), Moderator: Monica Starnes, Transportation Research Board (TRB)

Speaker: Dr Vivian Depoues, Institute for Climate Economics (I4CE), France

Speaker: Dr Olufunso Somorin, African Development Bank

Speaker: Mr Pierre-Etienne Bouchaud, European Investment Bank

Speaker: Prof Phil Paige-Green, Independent Expert, South Africa

Speaker: Dr Mark Henry Rubarenzya, PIARC Vice President-Elect, Uganda

Speaker: Dr Gerardo Flintsch, PIARC Chair TC 3.3 Asset Management

DAY 2: 7 DECEMBER 2021

Opening remarks: Ms Giulia Guzzini, Sina & TC1.4, Italy

Session 2: BUILDING CAPACITY FOR ADAPTATION AND RESILIENCE (ECONOMIC, SOCIAL AND ENVIRONMENTAL)

(14h05-15h10). Moderator: Mr Michael Daka, PROESS Consulting Engineers, Uganda

5- TC 1.4 Working Group 1 Presentation - Uniform and Holistic Methodological Approaches to Climate Change and other hazards

Speakers: Ms Marie Colin, TC 1.4 WG1 Leader, France & Mr Thomas Bles, TC1.4 WG1 Co-Leader, Netherlands

6- How definitions may shape community resilience capacity building

Speaker: Dr Ioannis Benekos, Center for Research and Technology Hellas (CE.R.T.H.) & TC1.4, Greece

7- Links between adaptation to climate change, resilience and asset management

Speaker: Dr Pierre Gayte, Cerema, France

8- Climate risk assessment for transboundary infrastructure

Speaker: Dr Michael Kizza, Nile Basin Initiative, Uganda





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Q&A (15h10-15h25)

15 min Networking/Meet the speaker & virtual coffee break in separate rooms (no translation)

Networking coffee A: Resilience in Sub-Saharan Africa (mostly English language but French and Spanish welcome as well).

Networking coffee B: Resilience in Sub-Saharan Africa (mostly French language but English welcome as well).

Networking coffee C: Resilience in Latin-America (mostly Spanish language but English welcome as well).

Session 3: IMPACT OF CLIMATE CHANGE, OTHER HAZARDS AND THREATS ON ROAD INFRASTRUCTURE AND OPERATIONS

(15h40-16h45). Moderator: Joseph Haule, Road Fund Board, Tanzania

9- Climate change and road contracting: Case Study Ghana

Speaker: Dr Patrick Amoah Bekoe, Department of Feeder Roads (DFR), Ministry of Roads and Highways, Ghana

10- Resilient assessments conducted in the Philippines and Dominican Republic

Speaker: Mr Thomas Bles, Deltares & TC1.4 WG1 Co-Leader, Netherlands

11- Climate resilient road materials: Temperature mapping for PG bituminous binders

Speaker: Ms Refiloe Mokoena, Centre for Scientific and Industrial Research (CSIR), South Africa

12- Climate impacts in road network in México: A geospatial analysis of impacts recorded during 2018-2020

Speaker: Mr Juan Fernando Mendoza Sánchez, Mexican Institute of Transportation (IMT) & TC1.4 Spanish Speaking Secretary, WG2, Mexico

Q&A (16h45-17h00)





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DAY 3: 8 DECEMBER 2021

Opening Remarks: Ms Tala AbuShuqair, Department of Studies, Research and Development & TC1.4, UAE

Session 5: ADAPTATION FRAMEWORKS, STRATEGIES, METHODOLOGIES AND TOOLS

(14h05 – 15h10). Moderator: Mr Nkululeko Leta, TC 1.4, South Africa

13- Update of the PIARC International Climate Change Adaptation Framework for Roads

Speaker: Ms Gordana Petkovic, TC1.4 WG2 Leader, Norway; Ms Laura Parra, TC 1.4 WG2 Co-Leader, Spain; Mr Stuart Woods, TC 1.4 WG2 Co-Leader, New Zealand

14- Mozambique case - ReCAP Guidelines

Speaker: Ms Emilia Boene, National Roads Administration (ANE) TC1.4, Mozambique

15- Conceptual framework to understand adaptation planning of road infrastructure Bogotá, Colombia

Speaker: Dr Juan Sebastián Cañavera Herrera, AECOM & TC1.4, United Kingdom

16- Adaptation Capability Framework

Speaker: Mr Craig Love, Transport Scotland & TC1.4, Scotland

Q&A (15h10-15h25)

15 min Networking & virtual coffee break in separate rooms (no translation)

Networking coffee A: Resilience in Sub-Saharan Africa (mostly English language but French and Spanish welcome as well).

Networking coffee B: Resilience in Sub-Saharan Africa (mostly French language but English welcome as well).

Networking coffee C: Resilience in Latin-America (mostly Spanish language but English welcome as well).

Panel discussion: WHAT ARE THE STRATEGIES AND TOOLS TO INCREASE RESILIENCE?

(15h40 – 16h45). Moderator: Mr Louis Bettini, TC1.4 English Speaking Secretary, Australia

Speaker: Lukasz Wyrowski, UNECE Group of Experts on Assessment of Climate Change Impacts and Adaptation for Inland Transport

Speaker: Dr Andrew Quinn, University of Birmingham, United Kingdom

Speaker: Mr Jeffrey Meek, Minnesota Department of Transportation, USA

Speaker: Dr Andrew Naimainye, Uganda Road Fund, Uganda

Speaker: Dr Yukio Adachi, PIARC Chair TC 1.5 Disaster Management

Concluding remarks and words: (16h45-17h00)

- **Technical conclusions of the Seminar, Ms Caroline Evans & Dr Mark Henry Rubarenzya**
- **Closing words, PIARC General Secretariat**

